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THE PRINTED BOOK

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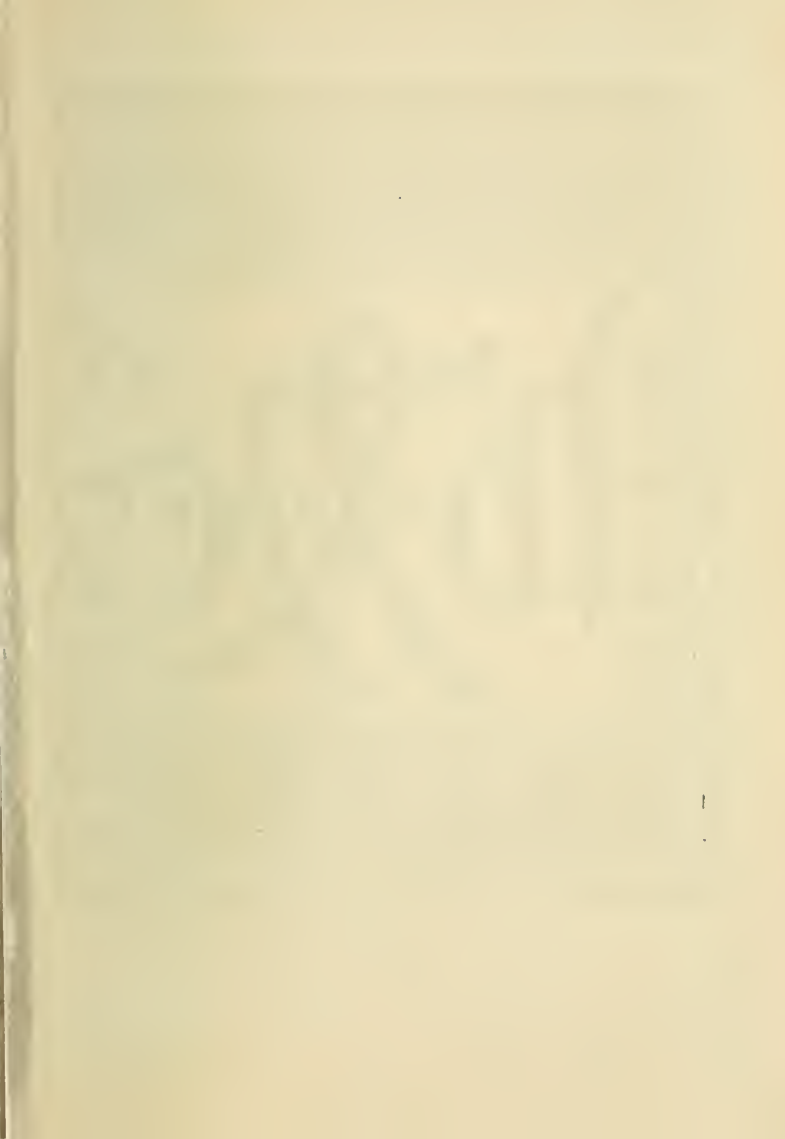
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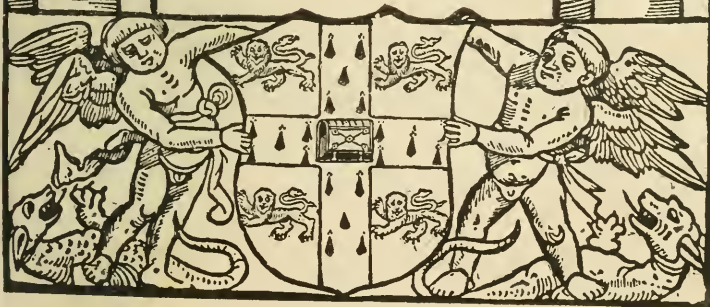


Caxton's device. (*Reduced*)

THE
PRINTED BOOK

BY
HARRY G. ALDIS, M.A.
Peterhouse

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*With the exception of the coat of arms at
the foot, the design on the title page is a
reproduction of one used by the earliest known
Cambridge printer, John Siberch, 1521*

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INTRODUCTION

Imagine, if you can, the world suddenly bereft of books. What would it mean? Practically, the record of the accumulated sum of human knowledge swept away, and the processes of civilization limited to the experience of a single life-time, supplemented only by tradition and hearsay, dependent upon the memory of individuals. It is only by some such feat of imagination that it is possible to realize in any degree the great part that books play in the daily life of the civilized world.

Books are the world's memory. In them is preserved the record of human thought, action, experience, and intellectual activity. We are, it is true, heirs of the ages, but our heritage consists to a large extent of books, and what we are pleased to call progress is made possible mainly through their aid. Books have come to be one of the commonest objects of everyday life. We turn to them instinctively for information of all and every kind, for intellectual recreation, and even for recreation that cannot be called intellectual.

But, what is a book? Doubtless we all think we know, but to define it in words may not be easy, so

it will be well to seek the help of a book. Dr Johnson, in the first edition of his *Dictionary* (1755), defined a book as 'a volume in which we read or write.' The *Oxford Dictionary* finds it no simple matter, and requires six columns for its full exposition, the main definition being 'a written or printed treatise or series of treatises, occupying several sheets of paper or other substance fastened together so as to compose a material whole.'

Of these written or printed treatises there are many varieties besides the printed volume familiar to us by daily use. Many centuries have passed since papyrus and vellum rolls gave place to the form of book which is now used throughout the western world. In the East a large part of the reading world is accustomed to books of quite other fashion, such as the manuscript books of India, written or incised on strips of dried palm leaf; the birch-bark books of Kashmir; and the liturgical books of Burma, some made of thin plates of lacquered metal, others manufactured from the cast-off clothes of the native sovereign. But these, as well as the block-printed books of China dating from the tenth century, the similar books of Japan, and the block-printed books of Tibet which resemble in shape the palm leaf manuscripts of India, do not concern us here. The scope of the present volume is limited to a brief outline of the origin and development of the

printed book of the western world, printed for the most part on paper, occasionally on vellum, and more rarely on other material.

In point of time the subject falls within the last five hundred years and coincides with the era commonly accepted as the modern period of history. The invention of printing occupies a natural place in the sequence of events. The time was ripe for its appearance, since the art of writing, which it was largely to supersede, had passed its finest development and was already exhibiting signs of debasement. Some new and swifter instrument than the pen was necessary to enable the impending outburst of intellectual life and vigour to find adequate expression. Printing was not the offspring of the renaissance of letters. It preceded that movement, and, as an art, was brought to practical perfection just at the moment when the coming of the new learning had need of it as a vehicle of dissemination.

CHAPTER I

THE ADVENT OF PRINTING

The year of the fall of Constantinople, 1453, is generally considered the dividing line between the medieval and the modern periods of history. But just about that same time another event was taking place: an event which, though not heralded by clash of arms or ruin of empire, affords an equally significant landmark. This was the invention of printing, or typography, as the art of printing with movable types is more precisely termed; and it would be difficult to point to any discovery which has had so far-reaching an influence upon the history of the civilized world.

This revolution, for revolution it may well be called, was brought into existence so quietly, so unobtrusively, that not only can no precise year be assigned to its beginning, but, like more than one important discovery of even recent times, the individual to be honoured as its inventor, and actually the country of its origin are matters of dispute.

The art of printing with movable types, whenever and wherever it may have had its beginnings, was

preceded by the production of single pictures printed from wood-blocks. One of the earliest of these which bears a date is the St Christopher of 1423, now in the John Rylands Library at Manchester. The authenticity of the date 1418 on another of these woodcuts, at Brussels, has been challenged on the ground that the figures have been tampered with. It seems a natural development that lines of descriptive text should be added to such woodcuts; and the 'block-books,' which consist of pictures and text cut on the same wood-block, have usually been regarded as occupying a position midway between the single picture and the book printed from movable type, thus forming a link in the evolution of the invention.

These block-books, of which upwards of a hundred issues and editions, comprising some thirty separate works, have been recorded, were produced chiefly in the Netherlands and Germany. They fall into two classes. The earlier were printed in thin pale brownish ink on one side of the leaf only. They were produced by placing a sheet of paper upon the inked block and transferring the image to the paper by friction on the back of the sheet with a burnisher or some similar instrument, without mechanical pressure. The other, and later, class were usually printed in a press with ordinary black printing ink and on both sides of the paper.

Since the contents of each individual page had to be engraved upon a block of wood, the making of a block-book was a laborious process, and the engraved blocks were, of course, useless for any other work. This method of multiplying copies was suitable only for works that were of moderate length and for which there was a large and continuous demand. These books were, accordingly, of a popular nature, mainly concerned with religious instruction or pious edification, and lending themselves readily to pictorial or allegorical illustration. Typical examples are the *Biblia Pauperum*, a series of pictures from the life of Christ, accompanied by parallel subjects from the Old Testament; the *Apocalypse*, an attractive subject for illustration; and *Ars Moriendi*, a series of pictures representing the trials which beset the dying and the spiritual helps by which they may be overcome.

The interesting question concerning these xylographic books is, do they, in point of time, really stand between the single woodcut pictures and the earliest books printed with movable type and so constitute a stage in the inception of the typographic art? At present no evidence is forthcoming which definitely connects any of them with a date earlier than that associated with the first printed books. The enquirer may, therefore, according to his bias, either consider them as steps towards the invention,

or place them side by side with the earliest offspring of the printing press.

While this method of reproduction was fairly convenient for the class of book for which it was used, it was quite inadequate to the cheap and speedy multiplication of those books which the revival of literature and learning was demanding. It is possible that this demand had as much influence upon the birth of the art which was to meet it, as the invention itself had in fostering and increasing the demand. The immense superiority of typography over xylography lay in the fact that while the xylographic blocks could be used only for the particular work for which they had been cut, the movable type, being composed of separate letters, could be used over and over again for any book, with corresponding economy both in time and in material. It was an epoch-making difference.

The actual facts as to when, where, and by whom printing with movable types was first invented are, except, perhaps, to a few partisan writers, veiled in obscurity; the sands of time have almost obliterated the first early steps. The relative claims of Germany, Holland, and even France, to priority have been advanced and upheld with much zeal, edged occasionally with more than a touch of acrimony. The faint light shed by contemporary record is little better

than a will-o'-the-wisp, and affords much room for ingenious argument and special pleading. The references to the subject found in books before the end of the fifteenth century agree generally in attributing the invention to Johann Gutenberg of Mainz, but some of them are obviously inaccurate in detail.

What is termed the 'Haarlem legend,' which attributes the discovery to Laurens Janszoon Coster of Haarlem about the year 1440, does not emerge until the second half of the sixteenth century; but it receives a certain amount of support from the story of the invention as related, on the authority of Ulrich Zell, the printer, in the *Cologne Chronicle* printed in 1499. This account says that the art was first invented at Mainz about 1440; that for the next ten years it was being investigated; and that in 1450 men began to print. But it goes on to say that 'Although this art was invented at Mainz as far as regards the manner in which it is now commonly used, yet the first prefiguration (*Vurbyldung*) was invented in Holland from the *Donatuses* which were printed there before that time¹.'

The *Donatus* here spoken of is the *De octo partibus orationis* of Aelius Donatus, the fourth-century

¹ A. W. Pollard: *Fine Books* (1912), pp. 34 ff., where the passage is printed in full.

grammarian; a book as familiar to the school-boy of the middle ages as *Euclid* was to the school-boy of yesterday. Of these early *Donatuses*, which are regarded as being among the very first productions of the new art, fragments of some twenty editions printed in Holland and about sixteen printed in Germany have survived. Unfortunately it did not occur to the printer of any of these that by adding to the little book his name and the date, he might achieve immortal fame.

Whether Holland or Germany be the rightful claimant to priority, there is little doubt that the development of the invention may be referred to the decade 1440-50. And, since the time was ripe for the discovery, it is possible that the idea may have been part of the *Zeitgeist* of the age, and ingenious inventors may have been at work on parallel lines in both countries. On the other hand, it is not impossible that, as has been suggested, the German artificer derived inspiration from the first tentative essays put forth in Holland. Be that as it may, it was at Mainz that the art was first developed to a practical issue, and it was from Mainz that this momentous invention spread throughout Europe.

The earliest piece of printing extant to which a definite date can be attached is an *Indulgence* printed at Mainz in 1454. Of this *Indulgence*, which was granted by Pope Nicholas V to such as

should contribute towards the expense of the war against the Turks, there are two practically contemporary editions in different types, one consisting of thirty-one, the other of thirty lines. The former of these must have been printed on or before November 15, 1454, as is shewn by the fact that in one of the surviving copies that date has been filled in.

With these indulgences three names are connected: Johann Gutenberg, a native of Mainz; Johann Fust, a goldsmith; and a younger man, Peter Schoeffer, who afterwards became Fust's partner and son-in-law. For the next four or five years the doings of these men constitute the story of the progress of printing, but the exact share that each bore in the work cannot be precisely defined. Gutenberg, who is regarded as the German inventor of printing, was the originator of the enterprise, and probably made his first experiments in the art during the latter part of his sojourn in Strassburg, continuing his investigations on his return to his native city of Mainz about 1446. Fust supplied the sinews of war in the shape of advances of money to Gutenberg, and afterwards assumed a more active share in the undertaking; while Schoeffer, who at first probably contributed mechanical skill, subsequently took chief part in the conduct of the business.

When, in August 1456, Heinrich Cremer, vicar

of St Stephen's Church at Mainz, recorded in a magnificent copy of the Bible¹ the fact that the rubrication and binding of the book was then finished, he doubtless intended to express pride and satisfaction at the completion of the two fine volumes. He probably had little thought of the importance this date would possess in connexion with the new and wonderful art by which the text of his book had been produced. This book was, indeed, a copy of the first printed edition of the Bible, and the first large book to issue from the press. It bears neither printer's name nor date of printing; but Cremer's inscription in the Paris copy shews that it must have left the press before August 1456. This edition is known variously as the Mazarine Bible, from the copy which first attracted attention having been found in the library of Cardinal Mazarin; or the Gutenberg Bible, on the assumption that it was printed by Gutenberg; but it is now more generally called the Forty-two line Bible, from the number of lines in a column of its page. Simultaneously with this, or shortly afterwards, the printing of another Bible was begun, in a somewhat larger type. This is known as the Thirty-six line Bible.

Neither of these editions bears any printed record of its origin, but it has been suggested that the

¹ Now in the Bibliothèque Nationale at Paris.

Forty-two line Bible came from the press of Fust and Schoeffer, while the Thirty-six line edition was the production of Gutenberg working alone. Two or three other books are also attributed to Gutenberg, though no book actually bears his name; but shortly after this time, perhaps tired out with the worries and vexations which dog the footsteps of the inventor, he gave up printing, and, becoming a pensioner of the Archbishop of Mainz, he disappears from the scene.

In 1457, Fust and Schoeffer, now working together, brought out the famous *Psalter*, the first printed book to contain the names of its printers and the date of printing. The execution of this beautiful book demonstrates that the printers had by this time attained considerable technical excellence. Their art had advanced beyond the experimental stage, and the business soon developed into a substantial commercial undertaking. The partnership lasted for another ten years, after which Schoeffer continued the press alone till the beginning of the sixteenth century.

CHAPTER II

THE SPREAD OF THE ART

For a few years Mainz held a monopoly of printing, but by 1461 the new art had been carried to Strassburg and to Bamberg; and soon, aided probably by the disturbed state of Mainz in 1462, it spread abroad to other places. At Cologne, Ulrich Zell, who set up a press there in 1466, was followed by upwards of thirty other craftsmen before the end of the century. Two years later Günther Zainer produced the first dated Augsburg book, and the incunabula printed at this important home of wood engraving include a considerable number of illustrated works. Nuremberg saw its first press in 1470. The most prolific printer in that busy centre of the book trade was Anton Koberger, printer of that somewhat over-rated book the *Nuremberg Chronicle* of 1493. Other towns followed in rapid succession, and by the end of the century printing had been practised in fifty-one towns in Germany.

In the meantime the invention had found its way into other countries. Italy received it at the hands of two Germans, Conrad Sweynheym

and Arnold Pannartz, who, in 1465, set up a press in the Benedictine monastery at Subiaco. After printing four books there, the first of which was the ubiquitous *Donatus*, they moved on to Rome in 1467. Apparently, success did not attend their enterprise, for in March 1472 they sought the aid of Pope Sixtus IV. Their plea, which discloses some interesting details concerning the operations of their press, gives a list of the twenty-eight different works they had up to that time printed, with the number of copies of each, usually 275. Including separate editions of these twenty-eight books, they had printed in all a total of 11,475 volumes.

Rome was followed by Venice in 1469, and more printers worked in Venice during the fifteenth century than in any other town. These, about 150 in number, included Nicolas Jenson, notable for the beauty of his roman letter; Erhard Ratdolt, from Augsburg, whose books, mainly mathematical and astronomical, are adorned with some particularly fine ornamental borders; Bonetus Locatellus, whose books are more numerous than interesting; and Aldus Manutius, of world-wide fame. At Milan, which in company with Florence and five other Italian towns first adopted the art in 1471, was published the earliest book printed in Greek, the *Grammar* of Lascaris (1476); and the *editio princeps* of Homer issued from a Florence press in 1488. Printing now spread very

rapidly through Italy, the pioneers in many cases being Germans; and by the year 1500, presses had been at work in more than seventy different towns south of the Alps.

France, also, was indebted to German workmen for the new art, and Paris was the first town to receive it. It was at the instance of two of the professors that Martin Crantz, Ulrich Gering, and Michael Friburger started an active press at the Sorbonne in 1470, and Paris soon became a busy centre of the craft. The only other French towns in which printing was carried on to any considerable extent during the century, were Lyons and Rouen, the latter of which became notable for the production of books of hours and other liturgical works.

In Holland the earliest book bearing a date is the *Historia scholastica* of Petrus Comestor, printed at Utrecht in 1473; but the Dutch *Donatuses*, mentioned in the preceding chapter, to which no certain date can be attached, together with a few other books belonging to the same group, are quite possibly earlier than this. Haarlem, claimed as the scene of the shadowy Coster's operations, produced no recorded printer until ten years after the Utrecht press had been started, and in the meantime printing had been introduced into some fifteen other towns in the Low Countries. The most important centres of early printing in Holland and Belgium were Deventer and

Louvain; but Bruges possesses a special interest from the circumstance that it was there that William Caxton, England's first printer, worked in partnership with Colard Mansion for two or three years before he returned to England to introduce printing into his native country.

Caxton was, as he himself states, born and brought up in the Weald of Kent. After serving an apprenticeship to a mercer in London he migrated to the south Netherlands, where, by 1463, he was established in the important office of governor of the English nation in the Low Countries. In 1471 he was living in Cologne, and probably there gained a technical knowledge of printing. Returning to Bruges he, in conjunction with Colard Mansion, a professional calligrapher, acquired printing materials, and together they printed at least three books in 1475-6, one of which, the *Recuyell of the Historyes of Troye*, was the first book printed in the English language. Some time in 1476 Caxton returned to England, and, establishing himself at Westminster, set up the first English press at the sign of the Red Pale, under the shadow of the Abbey. His earliest dated book, again in English, the *Dictes or Sayengis of the Philosophres*, translated from the French by Earl Rivers, was finished on the 18th of November 1477. By the end of the following year he had printed upwards of twenty books, and at least five times that

number before his death, which occurred some time in 1491.

Caxton was no mere mechanical producer of books. He took upon himself the labours of translator and editor as well; and it is no stretch of the imagination to believe that it was a love of books and a leaning towards literature that induced him to take up the art of printing. The Bruges *Troy* book was his own translation; to the *Dictes*, which he edited, he added a chapter concerning women; and he early turned his attention to producing an edition of the *Canterbury Tales*. He printed essentially for the English market, with probably a strong bias towards what most pleased his personal taste, and the majority of his books have a distinctly literary character. Commercial instinct, no doubt, supported him in pursuing this course, since the limited demand for the more serious works required by the scholar and the student would scarcely have justified the printing of them in England, especially as good editions could be readily imported from the continent. Consequently, classics, standard theological treatises, and the ponderous excogitations of the schoolmen are practically absent from the list of his publications. On the other hand, the many volumes of poetry, romance, and fabled story which came from his press must have stimulated the demand for such literature; while, at the same time, by his own

translations from the French, he enlarged the bounds of English recreative reading.

Caxton did not long remain the sole printer in England. Theodoric Rood, a Cologne printer, was at work in Oxford from 1478 to 1485; and an unknown typographer, called the schoolmaster printer, printed eight books at St Albans between 1479 and 1486. The first London press was that of John Lettou, who, soon after his commencement in 1480, was joined by William de Machlinia, and together they printed chiefly law books.

At Westminster Caxton was succeeded by his chief assistant, Wynkyn de Worde, who carried on the traditions of the press, in so far as a large proportion of his books consists of romances and poetical pieces; but, unlike his master, De Worde was a mere printer and shewed no trace of literary talent. His finest book, an English version of the *De proprietatibus rerum* of Bartholomaeus Anglicus (about 1496), was the first book to be printed on paper made in England. De Worde died about the beginning of the year 1535. During his long career he is known to have printed between seven and eight hundred books, but many of these were short popular works and a large number were merely new editions.

Richard Pynson, Wynkyn de Worde's chief contemporary, printed in London from about 1490 to 1530. As befitted the office of king's printer he

possessed the best-appointed printing house of his time in England. His output consisted to a large extent of law books and official work; but he also printed many books of literary interest, such as the *Canterbury Tales*, Barclay's English version of Brant's *Ship of Fools*, and Lord Berners's translation of Froissart's *Chronicles*, besides several liturgical books of very respectable workmanship. The only other English printer in the fifteenth century was Julian Notary, who began in London about 1496 and went on for nearly a quarter of a century.

CHAPTER III

THE FIFTEENTH-CENTURY BOOK

It requires some effort to realize that before the invention of printing all books were in manuscript, and that the laborious process of writing out each separate copy was the only means of reproducing a work. This business of making manuscript copies of books was carried on not only in the monastic scriptorium and other homes of scholarship, but was also followed as a regular profession, and in a great centre of learning, such as Paris, a vast number of calligraphers, rubricators, illuminators, binders, and others of kindred calling gained their daily living by this industry.

To make twenty manuscript copies of a book was just twenty times the work of making one copy; but in the printing of a book, when once the type is set up, any number of copies can be produced with comparatively little additional labour. It was this tedious business of writing out every separate additional copy that impressed Caxton with the advantages of printing. For, having, as he relates in his *Recuyell of the Historyes of Troye*, promised copies of the book 'to dyverce gentilmen and to

sunt omnia ossa mea. **E**t ani-
ma mea turbata est valde: sed tu
domine usquequo. **C**onuertere
domine ⁊ eripe animā meam sal-
uum me fac propt̃ misericordiā
tuam. **Q**uoniam nō est in mor-
te qui memor sit tui in inferno au-

From a Fifteenth-century Manuscript

lature: quasi duobz versibus alium
maris circuibant. Boves autē erant
fusiiles: ⁊ ipm mare sup duodecim bo-
ues impositum erat: quorū tres respici-
ebant ad aquilonē. ⁊ alij tres ad occi-
dentem. Porto tres alij meridiē. ⁊ tres
qui reliqui erant orientem: habentes

From the 42-line Bible printed at Mainz before August 145

my frendes,' 'in the wrytyng of the same my penne is worn, myn hande wery and not stedfast, myn eyen dimmed with overmoche loking on the whit paper.... Therfore I have practysed and lerned at my grete charge and dispense to ordeyne this said book in prynte after the maner and forme as ye may here see.'

The primary effect of the invention of printing was to render multiplication of copies of a book cheaper and more expeditious. It was, of course, a manuscript that the early printer had in his mind's eye when he set to work to produce a book. The result was not so much something entirely new in the shape of a printed book, as the production of a number of copies which closely resembled a manuscript in appearance. Indeed, an early printed book often looks so like a manuscript of the same work written in the formal book-hand, that, if the two were placed side by side, an unpractised eye would find some difficulty in distinguishing between them.

In designing his types, as the letters used in printing are called, the pioneer printer naturally followed the formal book-hand used in the district in which he was working, or the special hand customarily employed in the particular class of book which he proposed to print. Latin Bibles and liturgical works were generally printed in the black-letter which, under the unifying influence of the Church, it had become the habit to employ in writing books

for use in her services. In Germany varying forms of gothic text were adopted; while the round minuscule writing affected by Italian scribes formed the model for the roman type so widely favoured in Italy. Caxton's first types were based on the ordinary Flemish book-hand which he was accustomed to see in manuscripts during his residence in the Low Countries.

In the early days of typography it was customary for the printer to print only the bare text; just that part of the book which, in a manuscript, would be written by the scribe or calligrapher. Blank spaces were left for head-lines, initial letters, and other ornamental details which, as in the case of manuscripts, were afterwards added by the rubricator and the illuminator. The circumstance that these decorative features were executed by the same method contributes to the similarity of appearance presented by the manuscript and the printed book.

This finishing adornment of a book might be more or less elaborate, from simple red or blue capitals to finely illuminated borders and historiated initials in gold and colours. Like the binding of the volume, it was no doubt generally adjusted to suit the taste and purse of the purchaser; but books are frequently found which have never been through the rubricator's hands, the pages being still in the same state in which they left the press. In these cases it

will sometimes be noticed that the initial letter to be inserted is indicated by a small letter, called a director, printed in the blank space as a guide to the illuminator. A few printers attempted to dispense with the aid of the rubricator by printing the capitals and head-lines in red. This was a troublesome and not always successful process; but the very first dated book, Fust and Schoeffer's *Psalter* of 1457, contains some large and beautiful ornamental initial letters printed in red and blue, which are remarkable for the technical skill displayed in their production at this early stage in the art.

The practice of leaving blank spaces for the large capitals to be filled in by hand continued in vogue in some degree throughout the fifteenth century, more particularly in Italy. But the progressive printer was not slow to perceive the advantage of sending out a book complete from the press, and the use of woodcut ornamental initial letters printed in black along with the text soon became general. Borders and other decorative pieces, in imitation of the ornament of manuscripts were also brought into use, in many cases with excellent effect. Some of these borders and initials, such as the outline letters found in books printed by Anton Sorg at Augsburg, were obviously intended to be painted over by the illuminator, the skeleton design rendering his part of the work more expeditious.

In yet another respect do early printed books often resemble manuscripts. A scribe on completing the copy of a work might add some such expression as 'Finis' to indicate that the end of the book had been reached, or, perhaps 'Explicit,' followed by the name of the work and sometimes that of the author; but he seldom went so far as to add his own name and a record of the date. So too, a large number of incunabula—as books printed in the fifteenth century are frequently called—contain no intimation of when, where, or by whom they were printed. The *Psalter* of 1457 again provides the earliest exception. At the end is a paragraph stating that the book had been fashioned by the ingenious invention of printing without any writing of the pen, by the diligence of Johann Fust, a citizen of Mainz, and Peter Schoeffer of Gernsheim, and brought to a completion on the vigil of the Feast of the Assumption in the year 1457.

The early books, too, had no title page, and the information which we now look for on that page—author, title of work, publisher, and date—when given at all, is usually to be found, as in the *Psalter*, in the colophon, as this particular paragraph at the end of a book is called. The colophon is often accompanied by a pictorial or allegorical device which the printer adopted as his trade mark. Title pages did not come into fashion until about 1480, and at first consisted of one or two lines containing

merely the title of the book and perhaps the name of the author, placed in the upper part of the leaf. The tempting blank space below this is sometimes filled in with the printer's device, or in the case of a book printed for a bookseller, by the device of the latter. Failing a device, the page may display a woodcut illustration more or less relevant to the subject matter of the book. The title pages of Wynkyn de Worde's numerous small quarto tracts usually take this last form, and his selection of a woodcut was wondrously casual. A grotesque attempt at the appropriate is seen in the title page of his edition of Lydgate's *The Assembly of Gods*, which is adorned with a woodcut from an edition of Chaucer's *Canterbury Tales* depicting the company of pilgrims all seated at a huge round table.

The printer's device just referred to was at first regarded mainly as a trade mark. The earliest, that in Fust and Schoeffer's *Bible* of 1462, consists of two shields suspended from a branch. As these devices developed in pictorial and decorative character, especially in the early part of the sixteenth century, they partook also of the nature of an embellishment, and afforded scope for play of fancy and canting allusion. The devices of the Italian printers are distinguished by beauty of ornamental design. Those which consist of some variety of the combination of circle and cross in white on a black or red

ground are singularly effective. In France, where they are, perhaps, most numerous, they are more pictorial than in other countries.

One of the best known of these devices is the anchor and dolphin of Aldus of Venice, which made its first appearance in 1502. Among other notable examples are the fleur-de-lis of the Giuntas, the compass of Plantin of Antwerp, and, somewhat later, the sphere of the Elzevirs. A favourite form in France, as well as in this country, was the canting device, containing punning allusion to the name of the printer: the galley of the Paris printer Galliot du Pré; the griffin of Gryphius of Lyons; the mill and miller of Scotland's first printer, Androw Myllar; and the tun embodied in the devices of Grafton, Norton, and other English printers whose names ended in 'ton.' Badius Ascensius, the sixteenth-century scholar-printer of Paris, adopted as his mark a scene in a printing office with a press at work. John of Westphalia, a busy printer at Louvain from 1474 to 1496, occasionally used a small woodcut portrait of himself; and the English Elizabethan printer John Day also displayed his portrait, but in larger and handsomer fashion. Besides this, Day had another device, depicting a sleeper being awakened, with the motto 'Arise, for it is Day.' It was not till near the end of his career that Caxton made use of his well-known bold device.

For a time the sizes of printed books followed the lead set by manuscripts. Certain works, such as Bibles, books of canon law, and the commentaries of the schoolmen usually took the shape of ponderous volumes in large folio. What may be called the two standard sizes were the ordinary folio, standing about 12 inches high, used for books that could pretend to any importance; and the quarto, measuring about $7\frac{1}{2}$ by 6 inches, a favourite size for works of small extent or popular in character. An especially large number of these quartos were printed by Ulrich Zell, the first printer in Cologne, and by Richard Paffroed and Jacobus de Breda, the two fifteenth-century printers at Deventer. Smaller sizes were comparatively uncommon, and were generally reserved for books of devotion and similar religious works.

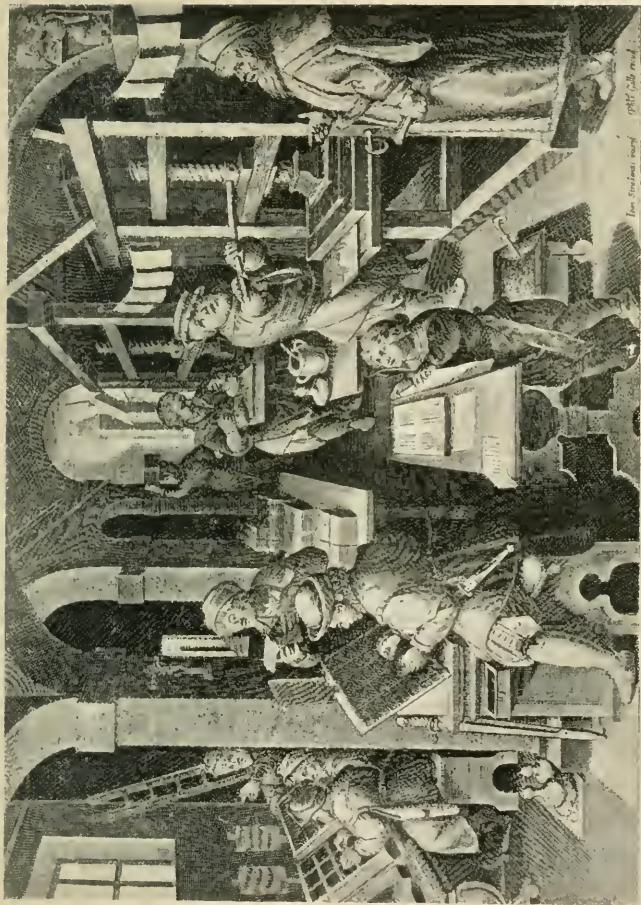
Various estimates have been made of the number of different books and editions printed in the fifteenth century, mostly varying from 25,000 to 30,000; and some have even attempted to compute the total number of volumes printed: but these are rather fruitless speculations. It is of more interest to know that of the whole output, approximately rather more than one-third was produced in Italy, about one-third in Germany, while somewhat less than a third represents the combined effort of all the other countries.

CHAPTER IV

THE SCHOLAR-PRINTERS OF THE SIXTEENTH CENTURY

By the beginning of the sixteenth century the art of book printing had nearly freed itself from the leading-strings of the manuscript. Instead of continuing to imitate the form and conventions of written books it was fairly started on the course of developing its own characteristics. In the process, the printed book sacrificed, as was perhaps inevitable, something of the dignity and restraint that belongs to the manuscript. But, on the other hand, by its facility of production and comparative cheapness, it acquired a practical convenience which has given it universality and made it a necessary adjunct to daily life.

A book now usually declares its personality at the outset, by displaying on a title page its subject, the name of its author, and the address of the bookseller by whom it is published. Generally the date is also given, though this is sometimes relegated to the colophon which is still retained for the purpose of recording the name of the printer, who by this time was often distinct from the publisher.



IMPRESSIO LIBRORVM.

*Perit vt vna vox capi aures plurima :
 Linunt ita vna scripta mille paginas.*

Don Strada: inv. del. G. B. G. B.

A Sixteenth-century Printing Office



Pagination, head-lines, lists of contents or chapters, and other aids to ready use are commonly found, and in its main features the book differs in no material respect from the book of to-day. The most striking and far-reaching innovation of the early years of the sixteenth century—perhaps the only important fundamental step in the whole process of the development of the printed book—was the introduction of small compact type, the use of which enabled the size of books to be reduced to handy and portable dimensions.

At this time, interest in the evolution of the book as the product of a new art gives place to interest in the printing press as an aid to the progress and expansion of learning and literature, before it became, as it did later, an instrument for the popular diffusion of knowledge. The dominant feature of the sixteenth-century press is the succession of scholar-printers who in various centres—Aldus in Venice, Froben in Basel, Badius and the Estiennes in Paris, Plantin in Antwerp—by their learning and their personal character and influence directed its power into channels which nourished and fed the desire for knowledge and learning.

From the outset of his career as a printer (1494–1515) Aldus Manutius deliberately devoted his energies to the cause of scholarship, and in the twenty-one years of his activity did more than any

other man to facilitate the spread of the new learning among the scholars of Europe. Many masterpieces of ancient Greek literature made their first appearance in print at his press; but the work by which he is most widely known is the long series of small octavo volumes of Greek and Latin classics bearing the familiar device of the Aldine anchor. It was doubtless a scholar's sympathetic understanding of the need for a form of book which, by its cheapness and handy size, might become the personal belonging and intimate companion of the student, that led the printer to make this new departure. In order to compress these works into the limited compass of an octavo volume it was necessary to have recourse to some other type than the large roman or gothic letter used for the folios of the library and the cloister; and in 1501 Aldus had cut for him a small new type the form of which was based on the cursive hand then current in Italy: the neat compact letter which we call italic. For his Greek type the handwriting of his friend Marcus Musurus is said to have been taken as a model. Neither of these selections was entirely fortunate. The Greek type, which preserved all the ligatures and flourishes of the cursive hand, is by no means easy to read; but the wide influence of the Aldine books set a fashion in Greek letter which lasted nearly three centuries. The italic letter, though elegant in appearance and

extremely compact, is not nearly so legible as the roman type to which we, at the present day, are accustomed; but the new type was received with much favour, was extensively copied, and retained great popularity, especially for small books, throughout the sixteenth century.

Basel had already been a centre of printing for some twenty years when John Froben, who was to become its greatest printer, published in 1491 as his first book an octavo Bible in small gothic type. His press is remarkable for the number and importance of its productions, as well as for excellence of workmanship. In his desire for accuracy Froben surrounded himself with a number of scholars to whom he deputed the work of editing and correcting. Chief among these was Erasmus, who, after visiting him on several occasions, in 1521 permanently took up his residence with the printer and gave fresh impetus to the press. It was from Froben's press that the first published edition of the Greek New Testament (edited by Erasmus) was issued in 1516. In the same year he issued the works of St Jerome in nine folio volumes; and when, in 1527, he met with his death by a fall from an upper window, his largest undertaking, the works of St Augustine in ten folio volumes, was passing through the press.

In Froben's later years his most considerable contemporary in Basel was Adam Petri, who printed

many works in the vernacular and favoured the writings of Luther and the reformers. But more prominent centres of printing in the cause of the reformers were Geneva, the Calvinist stronghold; Zürich, where Christopher Froschauer, printer of many English books, including the first edition of the Bible in English (1535), was busy with Zwinglian literature; and Wittenberg, where Lutheran tracts came almost daily from the press of Hans Lufft. Later in the century the reputation of Basel as a centre of printing was upheld by another learned printer, John Oporinus (d. 1568), who, among other preparatory occupations, had for four years acted as assistant to Paracelsus. Oporinus is said to have printed upwards of seven hundred books, and at one time to have employed more than fifty workmen. It was in his office that John Foxe, of the *Book of Martyrs*, was engaged as reader of the press during his sojourn at Basel.

The achievements of Aldus were not only recognized by his learned friends and the scholarly world at large, but they also stirred the admiration and emulation of contemporary craftsmen. Aldine editions served as copies for publishers of easy conscience to reprint—to pirate is perhaps too severe a term for a period when the idea of legal property in literature had scarcely been formulated—and they also served as a standard of excellence to be aimed

at by the more ambitious printer desirous of attaining fame for his own productions. On the death of Aldus Greek and Latin verses were composed in his honour by his distinguished contemporary Henri Estienne, who, during the first two decades of the sixteenth century, shared with Jodocus Badius Ascensius the honours of Paris printing.

Many of the books which Badius published contain a preface from his own pen. In one of these he declares it to be his aim to emulate the laudable exactness of Aldus; and the reputation for correctness which his impressions acquired made it the desire of the foremost scholars of his day that their books should bear his imprint. During his busy career of thirty-three years (1503-35) he printed more than seven hundred books, including almost all the Latin classics and a number of important contemporary works. Many of these bear on the title page his well-known device of a printing press at work, with the legend *Prelum Ascensianum* affixed to it.

Henri Estienne, or, in the Latin form of the name, Henricus Stephanus, was the first of a celebrated family of typographers who exercised their art in the French capital for more than a century and a half. He, also, was famed for the accuracy of his editions. After his death, in 1520, Simon de Colines, who married his widow, carried on the business

until 1526, when it was handed over to Robert, Henri Estienne's second son. This Robert was not only the most distinguished member of the family both for scholarship and for the importance of his publications, but is, perhaps, the most eminent in the whole list of French printers. His family circle included several scholars who were engaged in the editorial work of the press; and Latin is said to have become the ordinary language of the household from cellar to garret.

At this period the cause of learning and letters in France owed much to the patronage of King Francis I, but nothing at all to the opposition of the theologians of the Sorbonne, whose antipathy to the new learning was so bigoted that in 1533 they endeavoured to persuade the King to interdict altogether the practice of the art of printing in France. Robert Estienne, whose editions of the Bible and other books which favoured the spread of knowledge and enlightenment brought him into conflict with the champions of ignorance, received encouragement and protection at the hands of the sovereign, and in 1539 he was nominated printer to the king in Hebrew and Latin. After the accession of Henry II, in 1547, the royal protection was less effective, and the persistent opposition of the theologians at length drove Estienne to quit Paris for Geneva, where he was able to continue his work in a freer atmosphere.

He died in 1559, leaving a flourishing business to his eldest son Henri, who was one of the greatest scholars of his time.

Lyons in the early part of the sixteenth century earned notoriety by its piracies of Aldine and other desirable editions of the classics, but the work of Sebastian Gryphius (c. 1524–56) has given it a more worthy reputation in the annals of printing. Gryphius was one of the printers who favoured italic type, and of his numerous productions the most familiar are the little volumes of Latin classics in small italic letter with his device of a griffin on the title page. These handy pocket editions became very popular and the format was adopted by Guillaume Roville, likewise of Lyons, and by other publishers. Gryphius also issued in two folio volumes, in 1536–8, the *Commentarii Linguae Latinae* of his friend, the unfortunate Étienne Dolet, who for a short time himself exercised the art of printing at Lyons.

In the second half of the sixteenth century attention gravitates to the Low Countries, and especially to the Plantin press at Antwerp. It is related that Christopher Plantin, worker in fine bindings and ornamental leather caskets, while taking home a valuable piece of work one night was set upon by some street revellers and severely wounded in the arm. Being thus incapacitated from following his craft he returned to his original

occupation of printing, and from a small beginning built up one of the largest printing houses in Europe. The extent of his business, the importance of his publications, and the excellence of his workmanship brought Plantin a European reputation. The books which issued from his press cover a wide range of subjects: science, history, jurisprudence, the writings of the Fathers, Greek and Latin classics, and books in Hebrew. Many were finely illustrated, and all bear evidence of the care and taste he bestowed upon them in his ambition to be numbered among the great printers. His biggest work, the Antwerp Polyglot Bible (1569-73) exhibits the fine and handsome character of the types which distinguish his books. In 1570, Plantin received from Philip II a special privilege for the printing of liturgical books, and his press was soon sending forth missals, breviaries, books of hours, and other service books in enormous numbers. This class of book came to be a main feature in the output of the *Officina Plantiniana*, and was afterwards one of the chief sources of the prosperity of this great house.

After the founder's death in 1589 the Plantin press maintained its high standard of workmanship under the direction of his son-in-law, Jean Moretus; but there was a falling off in both the output and the importance of the books sent forth, science and classical works giving place to ecclesiastical history

and books of devotion. The energetic reign (1610-41) of Balthasar Moretus, son of Jean, brought a revival of prestige; but after the death of Balthasar the second, in 1674, attention was almost entirely confined to the printing of liturgical books. The business continued to be carried on by successive members of the family down to 1876, when this stately printing house was acquired by the city of Antwerp, and, preserved as the Musée-Plantin, it is one of the most fascinating and instructive extant examples of an old-world printing office.

In the seventeenth century the vogue for books of diminutive size reached its zenith in the little duodecimo volumes with which the name Elzevir is closely identified. The culmination of this fashion was in great measure due to the enterprise of the Elzevirs, a family who for upwards of a century carried on business in Leyden, Amsterdam, and other towns. In the Elzevirs we have parted company with the scholar-printers who themselves edited and revised the texts which they presented to the learned world. We have, instead, intelligent printer-publishers, excellent men of business, anxious to produce books that both textually and typographically should sustain their credit for good work. To secure correctness they employed scholars to edit their publications and see them through the press.

The origin of the house goes back to 1583, in which year Louis Elzevir, a migrant from Louvain, commenced publishing in Leyden. But it is from 1626, when Bonaventura Elzevir, a son of the founder, was joined by his nephew Abraham, that the fame of the house really begins. It was then that, having acquired a printing office of their own, they began to specialize in the issue of the characteristic small volumes, and the period from 1626 to the death of both partners in 1652 is the most notable in the history of the house. Bonaventura and Abraham were succeeded by their sons Jean and Daniel. In 1655 Daniel migrated to Amsterdam to join his cousin Louis, and the fortuitously celebrated *Pastissier françois* (a mere reprint of a Paris edition of 1653) bears the imprint of these two in that same year. Thenceforth the Amsterdam house took the leading place, and so continued until the death of Daniel in 1680. In all, some fifteen members of the family had been engaged in the book trade before the house came to an ignoble end at Leyden in the hands of the younger Abraham in 1712.

The Elzevirian duodeciminos achieved great contemporary popularity, and many authors thought it an honour to have their writings included in the series. But the acclaim was punctuated here and there with complaints at the smallness of type and the loss of dignity sustained by important works in

being printed in such diminutive format. The long series of volumes comprised a large proportion of the classic and standard literature of the day in well-printed and fairly correct editions, and possessing the special advantage that their small size enabled them to be sold at a price (many of them were published at eighteen-pence to two shillings) which brought them within easy reach of a wide circle of readers. In short, they stood in much the same relation to the ordinary edition as does the seven-penny novel of to-day to the six-shilling edition. Their contemporary success is therefore not surprising; but it is not so easy to account for the great fascination they have possessed for later generations of collectors. They cannot be considered attractive books: in truth, they are rather scrubby little volumes, and the narrow page gives them a mean and cramped feeling. For comeliness they cannot compare with the small books issued by Simon de Colines, the Gryphii, Christopher Plantin, and other sixteenth-century printers.

The success of the Elzevir books naturally brought imitations and even counterfeits. But the Elzevirs had little room for complaint on this score, for, in that age of free trade in literature, they made no scruple to add to their own series any book they thought worthy of inclusion in it, probably deeming it more of a compliment to the author's fame than

any wrong done to his pocket. Among the more prominent of these rivals were Jean Maire and Frans Hacke (Hackius), two of the six-and-twenty booksellers who were carrying on business in Leyden in 1651; and in Amsterdam, Jean Jansson, Abraham Wolfgang, and Jean Blacu. The last of these, one of the principal Dutch printers of his day, is, however, more celebrated for the large and important illustrated works which issued from his press. His printing office was furnished with nine presses, each presided over by one of the Muses. It was his father, Willem Janszoon Blaeu, who, about 1620, made the first important improvement in the printing press, which up to that time had differed but little from the press of the early printers; and there was no further change of any moment until, at the end of the eighteenth century, Earl Stanhope constructed, in England, the first iron printing press.

CHAPTER V

ENGLISH BOOKS, 1500-1800

In the early years of the sixteenth century Wynkyn de Worde and Pynson were the chief printers in England. The volume of printing going on in the country since its introduction by Caxton was slowly increasing, and fresh presses were being set up. The more prominent names include Robert Copland, a printer of literary habits; John Rastell, a printer of law books; and Thomas Berthelet, who, on the death of Pynson in 1530, succeeded to the office of king's printer. The books which came from the native press continued to be of a strictly insular character, and for but very few of them could there be any demand beyond the seas. It was still found more profitable to import books from the continent than to reprint them here; and some of the foreign printers were now printing books specially for the English market. The majority of these books were liturgical works of English use, and, until they were displaced in the reign of Henry VIII, a large trade in them was carried on, mostly by French printers. Chief among these were Antoine Vérard and François Regnault of Paris, the latter of whom had also a

book shop in London. In 1538, an edition of Coverdale's version of the Bible which Regnault was printing was seized and publicly burned in Paris. Jan van Doesborch catered for a different public when he printed at Antwerp, between 1508 and 1530, *Tyll Howleglas*, *Robin Hood*, and other popular English stories. For a hundred years after the middle of the century most of the books printed abroad for sale in England were concerned with religious and political controversy and had to be imported and circulated surreptitiously.

The most important event of the sixteenth century affecting the production of books in England was the incorporation of the Stationers' Company in 1557. Under the charter of incorporation no one was permitted to print anything for sale unless he were a member of the Company; and every member was required to enter in the Company's register the name of any book or copy which he claimed as his property and desired to print. The craft of printing was thus brought within strict compass, and a supervision inaugurated which was to exercise an important influence upon the production and distribution of books in this kingdom for the next hundred and fifty years.

As printing increased and the power of the press as an organ for the dissemination of ideas and opinions among the people became more evident,

both church and state developed a desire to obtain control over the output of printed literature. The Stationers' Company, with its charter powers, appears to have been regarded as a convenient agent for the exercise of such control, and from the middle of the sixteenth to the end of the seventeenth century the press was subjected to continual attempts to regulate it in accordance with the views of those in authority for the time being.

At the very beginning of Elizabeth's reign a system of censorship was introduced by an injunction ordering that no book should be printed unless it were first licensed by certain authorities. This regulation was but indifferently observed; other orders followed, and in 1586 the Star Chamber issued a stringent decree for the regulation of printing. This decree gave the authorities a more effective hold upon the legitimate press, but the suppression of seditious and heretical books, many of which were printed abroad and imported surreptitiously, was far from being successfully achieved.

Before the Stationers' Company received its charter, printing had been carried on at Oxford, St Albans, York, Cambridge, Tavistock, Abingdon, Ipswich, Worcester, and Canterbury. By 1557 all these presses were extinct, and, with one trifling exception, no printing was done outside London, until the Cambridge press was revived by the University

in 1583. A similar revival followed at Oxford two years later. In 1586 there were in London twenty-five master printers, owning among them fifty-three presses; and, since the Star Chamber decree of that year permitted no addition to these numbers, the production of books was limited to the capacity of these presses.

Notwithstanding official restrictions, the literary activity of the Elizabethan era was accompanied by an enormous increase in the output of the native press. New poems, new plays, translations from other literatures, especially Latin, French, and Italian, followed each other in quick procession, varied by graver treatises such as chronicles, voyages and travels, philosophical dissertations, and works of theology. All these were in addition to numberless Bibles, Prayer-books, legal treatises, and A B Cs and other school books, which, though more prosaic, brought much profit to those printers who were fortunate enough to possess monopolies for these particular books. Altogether the period covered by the reigns of Elizabeth and James I is one of the most interesting in the whole story of book production in England.

The list of English printers contains no names which can stand beside the great continental printers whose work has been referred to in the preceding chapter; but some very respectable work was done

by the best native presses, and enterprise and literary taste are apparent in the more important publications. Richard Grafton and Edward Whitchurch printed several issues of the *Book of Common Prayer* in the reign of Edward VI. Besides printing Hardyng's *Chronicle of Englande* and kindred works, Grafton also compiled two historical chronicles, which were printed by his son-in-law Richard Tottell in 1562 and 1569. This Tottell, publisher of the well-known poetical *Miscellany* which goes under his name, was the owner of an exclusive patent for the printing of law books. Henry Denham displayed good taste in many of the books he printed between 1564 and 1589; and Richard Jugge, four times master of the Stationers' Company, issued in 1568 the first edition of the 'Bishops' Bible,' a fine book containing good copper-plate portraits. From a typographical point of view the outstanding name is John Day whose career extended from 1546 to 1584. Under the patronage of Archbishop Parker, that great encourager of art and letters, Day had several new founts of type cut, and his work lifted English printing to a higher level. The first book printed in Anglo-Saxon characters (Aelfric's *Paschal Homily*) came from his press, as did also the English version of Foxe's *Book of Martyrs* (1563). It is probable that for a time Foxe himself worked in some editorial capacity in Day's printing house, as

he had previously done at Basel in the office of Oporinus, who published the first (Latin) edition of his famous book in 1559.

The most influential man in the Company about this time was Christopher Barker, who as queen's printer was much occupied with the printing of Bibles and official work. He was succeeded in 1599 by his son Robert, whose name is associated with the publication of the Royal Version (the 'Authorised Version') of the Bible in 1611. Another important stationer was William Ponsonby, the leading literary publisher of Elizabethan times. In 1590 he brought out Sir Philip Sidney's *Arcadia*, and in the same year the first three books of Spenser's *Faerie Queene*. Edward Blount, who succeeded to Ponsonby's reputation as a publisher of *belles lettres*, issued, in 1603, Florio's translation of Montaigne's *Essays*, and published several of Marlowe's works. He was also one of the four partners in the publication of the First Folio *Shakespeare* (1623). John Norton was in a big way of business, and his name is borne by some of the most important books of the first decade of the seventeenth century. George Bishop, another prominent man, was partner in Holinshed's *Chronicles* and Hakluyt's *Voyages*; and John Bill was bookseller to King James and Sir Thomas Bodley.

But none of these names are to be found in the imprints of one of the most interesting sections of

Elizabethan literature: those much-sought-after little thin quartos in which the plays of Shakespeare and his fellow-dramatists made their first appearance in print. These, hardly worthy the notice of big publishers and opulent monopolists, were left to the more obscure men, who have little else to distinguish them among the eight hundred and more Londoners who, between 1540 and 1640, engaged in the printing and selling of books. Among those who were concerned with the Shakespeare quartos were John Busby, Andrew Wise, Edward White, a dealer in ballads, James Roberts, the almanac patentee, and John Danter, an unscrupulous pirate.

Having regard to the comparatively small field open to English printers of the sixteenth century, and the official restrictions and vexations to which they were subjected, we need not be surprised that printing in this country did not attain any great degree of excellence. But, apart from technical merit, the production of the great body of Elizabethan literature from the small number of existing presses is a sufficiently noteworthy performance. Up to the middle of the century English books retain much of their early character, but by about 1570 or 1580 roman type had come into general use, displacing the old black-letter for almost all books except Bibles, law books, and a few other classes. Italic letter was also used to a considerable

extent, but chiefly in a subsidiary capacity, and it never, in England, acquired the vogue which it attained on the continent. Throughout the sixteenth century a border was a common adornment of the title page, and the wording of the title was usually fairly brief and simple. These borders were of various kinds, architectural and arabesque ornament predominating; and in the second half of the century an effective border built up of small ornaments was frequently employed. Titles, in the Stewart period, tend to become verbose. The border, for which there is no longer room, disappears; and the title, sprawling down the page in a confused variety of types, either wraps the subject of the work in a maze of words, or usurps the function of a list of contents. In controversial works the title page sometimes affords opening for a telling home-thrust at an adversary. Fancy titles, which give no indication of the subject matter of the book, are frequently adopted; while the lure of alliterative titles continued to be a snare to writers of pious tractates.

From the accession of Charles I the censorship of literature, which had relaxed somewhat in the previous reign, was exercised with fresh vigour; but on the abolition of the Star Chamber in 1641 all restraint vanished for the time being, and by 1649

the number of printing houses in London had increased to more than sixty. The main occupation of these presses was the printing of pamphlets. The Civil War was a conflict of words and arguments as well as of arms, and whole regiments of pamphlets were pressed into the service on each side, charge and counter-charge making a clash and din, amid which literature itself was wellnigh lost sight of. The Parliamentary party, although the professed champions of liberty, found this freedom but little to their taste. They soon endeavoured to put a curb upon the press, and it was their action that called forth Milton's protest on behalf of the liberty of unlicensed printing. But the *Areopagitica* (1644) fell upon deaf ears, and the news press, at least, continued to be the object of a strict censorship.

Above the flood of pamphlets a few books stand out like landmarks, preserving the continuity of letters through this stressful period. Sir Thomas Browne's *Religio Medici* made its appearance in 1642, and in 1645 Milton's collected poems were brought out by Humphrey Moseley, then the leading publisher of that class of literature, who also issued works by Crashaw, Suckling, Herrick, and other poets. In 1650 came Jeremy Taylor's *Holy Living*, followed the next year by his *Holy Dying*; and the first edition of Izaak Walton's *Compleat Angler* was published in 1653. There were also larger books,

like the first volume of Dugdale's *Monasticon Anglicanum* (1655); and that *tour-de-force* of the English seventeenth-century press, Brian Walton's Polyglot Bible, which contains the text of the Scriptures in nine languages and was printed by Thomas Roycroft in six folio volumes in 1654-7.

In the more settled times of the Restoration literature experienced a revival. This revival was accompanied by a resuscitation of the censorship, and the Licensing Act of 1662, as administered by the active zealot Roger L'Estrange, was the most stringent measure of press control ever put into force in this country. This act, after being renewed at intervals, finally expired in 1694, and no further attempt was made to supervise the output of the press. Among the books of this time theology holds a largely preponderating place, particularly that section of it usually termed practical divinity, such as the writings of Richard Baxter and John Bunyan, and the sermons of South and Tillotson. Indeed, the *Pilgrim's Progress*, which made its first appearance in 1678, is more typical of the books in common circulation at that time, than, say, Wycherley's play *The Plain Dealer*, published in the preceding year. The pamphlet, though now occupying a less prominent position, was still much used as a vehicle for the expression of political and controversial opinion.

With the opening of the eighteenth century the world of books begins to approach modern conditions. The habit of reading was no longer confined to the limited circle of the learned and the leisured, and literature was now addressing itself to the people at large. *The Tatler* of 1709-11 was succeeded by *The Spectator* of 1711-12, which circulated in thousands and had many imitators and successors. *Robinson Crusoe* made its debut in 1719, and the *Gentleman's Magazine* was launched by Edward Cave in 1731. Richardson's *Pamela*, which appeared in 1740, was followed two years later by Fielding's *Joseph Andrews*. After these came *Clarissa Harlowe* (1747-8), Smollett's *Roderick Random* (1748), *Tom Jones* (1749); and the novel, thenceforth, takes a continuously increasing position in the world of books. The remarkable literary activity of this century is also noticeable in other directions. Up to 1709 the collected works of Shakespeare were accessible only in the four folio editions of 1623, 1632, 1664, and 1685; but between 1709 and 1790 there were published upwards of twenty critical editions. The important works of Hume, Robertson, and Gibbon inaugurated a new era in historical study; and the numerous works dealing with local history and antiquities gave occasion for the production of some fine books illustrated with engravings. At the other end of the scale are the children's books, the

Tommy Prudent, *Goody Two Shoes*, and other 'improving' stories, which have rendered famous their publisher and originator, John Newbery, the busy bookseller and patent-medicine vendor of St Paul's Churchyard.

The right of an author to property in his work was recognized for the first time by the law of the land in the Copyright Act of 1709. As a rule, however, authors continued to sell their work outright to publishers, and in the eighteenth century the professional writer was to a great extent the employé of the bookseller-publisher. The leading publisher at the opening of the century was Jacob Tonson, of the 'Shakespear Head,' who published for Dryden. A little later came Bernard Lintot, whose name is connected with that of Pope. Robert Dodsley, himself a poet and playwright, published works by Samuel Johnson, Gray, Goldsmith, and others of his large circle of friends. The energetic Andrew Millar carried through the arrangements for bringing out Johnson's *Dictionary* (1755), and his successors Thomas Cadell and William Strahan were in their turn important personages in the publishing world.

For two hundred years the ordinary sizes for English books had continued to be the folio, measuring about twelve by seven-and-a-half inches, and the quarto, of about seven-and-a-half by six inches. These two main sizes were varied by a larger folio

for more important works, and an octavo about six inches high, for the smaller books. In the eighteenth century there is a greater variety of sizes and a larger paper is in general use. The folio is still used, more especially for topographical works with illustrations, but for ordinary books it gives way to the quarto: not the small square book of the preceding century, but a more imposing volume, measuring some ten by eight inches, in which there is space, as occasion may demand, either for packing much matter, or for the luxury of large type and wide margins. For everyday literature the convenient octavo size and also a large duodecimo (seven by four inches) came into general use. The standard of printing, as a whole, shews a considerable improvement upon the dark days of the Commonwealth period, though, with some exceptions, the craftsmanship is mediocre and the appearance of the books quite undistinguished. In general, the paper is indifferent in quality and too brown in colour, while the ink lacks sufficient blackness to make a good contrast, and this gives an appearance of weakness to the printed page.

During the first quarter of the eighteenth century and for some time previously most of the best type in use in England came from Holland, the country which at that time held pride of place in the printing world. When Richard Bentley was reorganizing the

University Press at Cambridge towards the end of the seventeenth century, it was to Holland that he sent for new type, and a Dutelman, Cornelius Crownfield, was engaged to superintend the work. In 1667 Dr John Fell established a type foundry for the Oxford University Press, and for several years afterwards some of the best printing in this country was done at Oxford. Good examples may be seen in Anthony Wood's *Historia Universitatis Oxoniensis* (1674) and George Hickes's *Thesaurus* (1705), which came from the University press, and the magnificent Bible printed by John Baskett in 1716-7, which, from the numerous misprints it contains, came to be known as 'a Baskett-full of printer's errors.' Other efforts to improve English typography were being made, and in 1722 William Caslon, who had experimented in type cutting, designed for William Bowyer, an excellent printer, a new and handsome fount of roman and italic letter which was used for the folio edition of Selden's works printed in 1726. The beauty of the Caslon letter soon caused it to come into favour, and up to nearly the end of the century his types were almost exclusively used by those who made any pretence to fine printing.

Printing had now spread throughout the provinces, and every town of importance could boast its printing press. The greater number of these presses were connected with the publication of

newspapers, and very few places produced books of any note. An outstanding exception is the work of John Baskerville at Birmingham. Baskerville, who was a skilled penman and cutter of monumental inscriptions, having turned his attention to type founding, issued, in 1757, a quarto edition of *Virgil* as his first book. He conceived the ambition of printing a Prayer-book and a Bible in a handsome manner, and to enable him to do this he secured the appointment of printer to the University of Cambridge for a period of ten years from 1758. Four editions of the Prayer-book were issued by him in 1760, and three years later came his *chef-d'œuvre*, a folio Bible upon which he had lavished much care and which has been described as 'the finest English Bible ever produced.' Lack of support caused him much discouragement. His books were not a commercial success; the Bible of 1763 was, in particular, a hopeless financial failure. Nor could his types make any headway in the trade, for the Caslon letter had secured a firm hold on the market. But his books remain a landmark in the annals of English typography. Their reputation is due not only to his special type and his good taste, but, recognizing their importance, he also gave particular care to choice of paper and quality of ink. The result of his efforts has caused his name to be bracketed with those other eighteenth

century masters of the typographic art, Bodoni of Parma and the Didots of Paris.

The aim which the brothers Robert and Andrew Foulis set before themselves when they established their famous press in Glasgow was not merely to bring out well-printed books, but they aspired also to the distinction of a learned press; and both the quality of their printing and the accuracy of their texts give them a claim to be classed with the scholar-printers of the sixteenth century. Greek and Latin classics and reprints of standard works form the bulk of the numerous publications, more than 550 in number, which they issued between 1742 and 1776. Among these the great *Homer* of 1756-8, in four folio volumes, stands out pre-eminent. The renowned 'immaculate' *Horace* of 1744, with but six errors, is one of the many volumes in smaller format, the good printing, careful editing, and moderate price of which are characteristic of the Foulis press.

The stately volumes printed by Thomas Bensley and by William Bulmer in the closing years of the eighteenth century should perhaps be regarded as firstfruits of the modern period of printing.

CHAPTER VI

THE MODERN BOOK

At the beginning of the nineteenth century the process of producing the printed book differed in no important respect from that of three centuries earlier, when the art of printing was still a recent invention. Improvements in the printing press had enabled a somewhat quicker rate of impression to be attained at a less expenditure of labour, but the principle of action remained the same. Paper was still made by hand, each sheet separately in a wire mould; and type was set up letter by letter, much in the same manner as the fifteenth-century compositor was accustomed to work. The first quarter of the century saw two innovations—the steam printing machine and the paper-making machine—which revolutionized the process of printing; but there was still upwards of half-a-century to wait before machinery should invade the domain of the compositor.

The printing machine invented by Frederick Koenig in 1811-14 quadrupled the hand-press output of 200 to 250 impressions an hour. In 1827 Applegarth and Cowper's new machine turned out nearly

5000 sheets an hour, and even this was soon bettered by further improvements. The abolition of the Paper Duty in 1861 was followed by the introduction of machines which printed newspapers from a continuous roll of paper; and this development has culminated in the huge machine which prints, folds, and counts a sixteen-page issue of *Lloyd's Weekly Newspaper* at the rate of 144,000 copies an hour.

Stereotyping, an important auxiliary to the use of machinery in printing, was opportunely revived in 1802, largely through the efforts of Earl Stanhope, the inventor of the iron printing press. The art had been discovered in this country by William Ged, an Edinburgh goldsmith, about 1727, but in his endeavours to perfect the invention he met with much opposition and discouragement from type foundrymen and printers. He succeeded in producing only two or three books by this process, among them an edition of *Sallust* in 1739, and on his death ten years later his discovery dropped into oblivion. Stereotyping is the process by which metal casts are made from pages of type which have been set up and are ready for printing. Instead of being composed of separate letters, as the pages of type are, these casts consist of solid plates having the letters in relief on the surface, and in this respect they are akin to the wood-blocks from which the

block-books of the fifteenth century were printed. By making stereotype plates of a work, fresh impressions can be printed off without the expense of re-setting the type. This process is, therefore, much used for books which are in continuous demand, or of which successive editions, involving few or no alterations, are likely to be called for. A further advantage is that by printing from plates the wear of type in long impressions is saved, and, also, as soon as the plates are made the type can be released for other work.

The direct effect of these mechanical inventions was to facilitate the production of books, and this led naturally to an enormously increased output of printed literature and a cheapening of its cost. By the end of the eighteenth century the price of books had, if anything, increased, and for some years the tendency was still upward. Cheap books were not however the invention of this new age of machinery. Chap-books and small religious works had been printed in large numbers from at least Restoration times; and neither the crudely printed children's books sold at a farthing by James Catnach of Seven Dials (*c.* 1814–38), nor the *Cheap Magazine* of George Miller of Dunbar, with its circulation of 20,000 copies a month, were the outcome of new methods of production. But the facilities for increased output were utilized by Charles Knight in his schemes for

providing the public with good literature at a cheap rate. His *Penny Magazine* (1832-46), illustrated with woodcuts, was a pioneer in that field; but though within twelve months it had reached a circulation of 200,000 copies, it was finally ousted by competitors of less improving but more attractive character. The *Penny Cyclopaedia*, of 1833-44, was followed by a series of shilling 'Weekly Volumes' which led off in 1844 with a *Life of William Caxton* by Knight himself. But, again, the standard was too high to achieve commercial success: the *Cyclopaedia* involved a huge financial loss, and the average sale of the 'Weekly Volumes' was scarcely 5000 copies. By this time publishers had discovered the advantage of linking up a number of volumes by issuing them in uniform style as a series, under a general title; and many of these 'Libraries,' as they were called, sold in large numbers. Among the most popular were the 'Run and Read Library,' the 'Parlour Library,' Murray's 'Family Library,' and, perhaps chief of all, the 'Railway Library' which numbered some 1300 volumes and included works by most of the popular novelists.

The illustrated 'Annuals,' which came into existence about 1820, were for some years the stereotyped form of Christmas gift book, and are a distinctive feature among the publications of the second quarter of the century. In the hey-day of

their vogue many of the leading writers, artists, and engravers were occupied in their production, and it has been estimated that the total proceeds from the sale of them for the year 1829 amounted to £90,000. One of the earliest was the *Forget-Me-Not*, which was issued annually from 1823 to 1847, and reached a circulation of 18,000 copies. There were also *Friendship's Offering*, started in the following year, *The Amulet*, edited by S. C. Hall, the *Juvenile Forget-Me-Not*, and others. Those of a rather more ambitious format included *The Keepsake* of Charles Heath, *The Picturesque Annual*, *The Landscape Annual*, and Lady Blessington's *Book of Beauty* which, though a late comer, quickly took a leading place. As gift books these Annuals were succeeded by the drawing-room table book—*Beauties of the Poets*, *Gems of Landscape*, *Poems of Eliza Cook*, and other favourites—in elaborate and heavily gilt cloth bindings; and these, in turn, disappeared from view when the large table on which they were displayed went out of fashion. Since then the style of Christmas books has passed through various phases, down to the 'colour-books' of to-day.

By contrast to these gift books, the novel depends for its existence entirely upon readers, and the changes it has passed through reflect the reading habits of the times. In the days of Richardson and Fielding a novel might appear in anything from

two to nine volumes, but in the nineteenth century three volumes became the regulation form for new novels, and, since nothing less would satisfy the circulating-library reader, publishers in order to work off a short novel would append to it one or two short stories so as to fill out the three covers. The tyranny of the three volumes continued until the revolt of the circulating libraries in the 'nineties.' By 1893 the one volume novel had begun to appear, the struggle between the two forms raged hotly in 1894, and in the following year the old three-decker collapsed, the libraries having declined to take any more. The three volume novel at a guinea-and-a-half with its cheap reissue in yellow picture boards at two shillings then gave place to the one volume issue at six shillings, followed by its sixpenny or sevenpenny reprint.

Two notable features among the publications of the present age are the great number of illustrated books, an outcome of the facilities afforded by mechanical processes of pictorial reproduction, and the extraordinary number of cheap reprints, in handy and attractive form, of standard and popular books which have ceased to be copyright. Some idea of the total number of books published annually in the kingdom may be gained from the figures given in the yearly volumes of *The English Catalogue of Books*. The *Catalogue* for 1913 contained 12,379

entries, of which 9541 represented new publications, and 2838 new editions.

From a typographic point of view English books of the first half of the nineteenth century possess but little interest. Some of the best work of the early part of this period came from the presses of Thomas Bensley and William Bulmer, the latter of whom printed the imposing Boydell *Shakespeare* (1791–1802) and several of the works of Dibdin the bibliographer. These books also shew the new fashion of type which set in at the end of the eighteenth century and soon prevailed to the exclusion of every other model. This new letter, known as ‘modern face¹,’ is in the style of that used by the celebrated Bodoni press at Parma. A particular form of it, which exaggerates the thick strokes, and is consequently called ‘fat face’ type, was much in favour, more especially for the larger books. Recently this fat face letter has been resuscitated on a refined model, and is a feature in the better-class printing of the last quarter of a century.

The first break in the monotonous use of this uninteresting fashion in type was made by the younger Charles Whittingham, of the Chiswick Press, who, in conjunction with his friend William Pickering, the publisher of the miniature editions

¹ See page 79.

known as Diamond Classics, revived the use of Caslon letter in 1844. An awakening of interest in the artistic aspect of typography followed this innovation, and the modified form of the older type, known as 'old style¹,' which was shortly afterwards introduced, has steadily grown in favour, though 'modern face' is still generally used for many classes of books. The Chiswick Press, which has continued to set a high standard in fine printing, also re-introduced the use of ornamental initial letters and drew upon some of the best French models for this purpose.

The founding of the Kelmscott Press, which marks the next important epoch, gave progressive force to what may be regarded as the renaissance of printing. Among the many private presses which have borne a part in this movement, the Kelmscott and the Doves take a prominent place, both for the quality and the quantity of their work and as representing the extremes of decoration and simplicity. William Morris's 'Golden' type, which was used in his first book (*The Story of the Glittering Plain*, 1891), was based on the roman letter of Nicolas Jenson, the Venetian fifteenth-century printer. His other types, the 'Troy' and the 'Chaucer,' were two sizes of a simplified gothic character, designed under the influence of early German founts. Of the fifty-three books produced during the seven years' activity

¹ See page 79.

of the press, the highly extolled *Chaucer* takes a pre-eminent place. It cannot be denied that the Kelmscott books are examples of triumphantly excellent workmanship; but, at the same time, it is impossible not to feel that they are achievements in decorative art rather than in typography. The books of the Doves Press, eschewing all ornament, rely for their effect upon perfection of letter-press, and in this respect they resemble the Foulis books of the eighteenth century. In their simple dignity they present a strong contrast to the Morris books in which lavish decoration and restless borders distract attention from the text, which is, after all, the essential element of a book.

The books of the Vale Press (1896–1904) were printed at the Ballantyne Press under the direction of Mr Charles Ricketts, who designed the three special founts and most of the decorative cuts used in these volumes. From the Ashendene Press Mr C. H. St John Hornby has sent out several fine books printed in a type modelled after that of Sweynheym and Pannartz, the first printers in Italy. This bold, well-balanced type finds its best expression in the books of larger format, such as the *Dante* of 1909, and the *Morte d'Arthur* of 1913. Of the books printed by Mr C. R. Ashbee at his Essex House Press those in Caslon letter are the more pleasing, though the *Prayer Book of King Edward VII* (1903),

printed in Mr Ashbee's 'Prayer Book' and 'Endeavour' types, is a very striking volume. Coloured woodcut illustrations and ornaments are a distinguishing feature in the series of charmingly designed little volumes that have come from Mr Lucien Pissarro's Eragny Press. More important than any of these special types, in that they have advanced beyond the private press stage and have entered the arena of practical publishing, are the successful founts designed by Mr Herbert P. Horne for the Florence and the Riccardi presses. The fact should not be overlooked that excellent work, which will probably bear fruit in direct influence upon the trade craftsman, is being done in some of the municipal schools of art and technology.

Other countries have not been slow in taking up this challenge, and the movement for the improvement of printing has spread throughout Europe and across the Atlantic. American essays in fine printing have not widely departed from the general character of American typography. The influence of the Grolier Club and the De Vinne and Merrymount presses have been prominent contributors to the best work. Among less ambitious efforts the Mosher books, even though more complimentary to the author's fame than contributory to his purse, make a strong appeal to the lover of dainty volumes. Many American types have a tendency to leanness

which gives the impression of weakness in design, due to absence of that slight emphasis, which, without obtruding itself upon the vision, gives character and firmness to the letter. This apparent weakness is increased by the greyness of ink and the dead whiteness of paper common in American books. France is, on the whole, conservative, and new types adhere closely to traditional roman models. Among recent designs some of the italic founts are, perhaps, the most successful, while those books in which decoration plays a part generally display that freedom and grace which characterizes French art. In Germany the modern revival in printing dates from the beginning of the present century, and the effort here is more apparent and self-conscious. Some of the modern types make a bold attempt to break away from the tradition of *Fraktur*, or German text, which has so long held German book-type in thrall; but they also exhibit a determined aversion from a frank acceptance of roman type as an ideal model. A general fault in the new founts is that the letters do not combine into words but stand apart, each asserting its individual claim to be read. The modifications of *Fraktur* are mostly too heavy and black, and are not kind to the eye. The development in Scandinavian printing is proceeding on vigorous and distinctive lines in harmony with its northern habitat.

The permanent value of the work of the private presses referred to above will probably be found not so much in the books they have issued, as in the stimulating influence they have had upon the higher class of book-printing. The aim in most cases has been to create the book beautiful. The conditions under which machine-printed books, published in the ordinary course of business, are produced, do not admit of the lavish care that is bestowed upon the offspring of the private press. But if the latter may claim pre-eminence in the creation of the book beautiful, the leading book-printing houses can certainly lay claim to superiority in the production of the book readable.

The chief factors which influence the appearance of a printed page are the design of the type and its arrangement upon the page. The ideal type for a book that is intended to be read should be so designed that the act of reading may be as nearly as possible unconscious. It should have a reposeful but sufficiently firm effect, carrying the eye smoothly along without any distracting features. The letters should so occupy the spaces allotted to them that they lose their individuality and combine closely into compact words; any characteristic which produces a thorny or dazzling effect should be ruthlessly suppressed. Many of the types of special design exhibit some eccentricity, often in but one letter, which attracts

attention and mars the general appearance. The lower case 'e' is a frequent sinner in this respect by reason of the angle at which the cross-bar is tilted; and the tail of 'g' is a troublesome problem. It would be invidious to exemplify these weaknesses, but those who have examined these types will readily recall instances. The preponderating use of roman type is evidence of its superiority for general purposes. Most modern founts of this letter follow either the Caslon or the Jenson model. The former has the long letters tall in proportion to the body of the type, and this gives the lines a more open appearance than in the Jenson style, which usually has a larger faced character with less difference in height between long and short letters, and the lines thus seem closer together. Among new roman founts of recent years the Riccardi type is particularly harmonious and restful, while its firmness and directness of design make it pleasantly legible. But for the weakness of the figures, and an irritating punctuation mark—a hybrid between a hyphen and a dash—which appears intended for a pause but looks like a hesitation, this type would seem wellnigh perfect of its kind.

The appearance of a printed page is also largely affected by the size of the type, the distance between the lines, and the spacing between the words. In the early part of the nineteenth century a comparatively small-faced type with a liberal amount of

space between the lines was in favour. A century later the tendency is to the other extreme, and we now frequently see a large-faced type, the lines set closely together, and narrow spacing between the words. Occasionally, the customary breathing space after a full stop is so contracted that the break is hardly greater than between the words of the sentence; and, sometimes, even the paragraph is abolished, and, instead, a small ornament is inserted in the line at the point where a new paragraph should begin. All this may produce an artistic effect, preserve 'the colour of the page,' and so forth; but it is fatiguing and tiresome to read. The eye is so much occupied in deciphering the words of the print that the mind is not at full liberty to grasp the meaning the words are intended to convey. A book is much pleasanter to read if the words are sufficiently distinct not to require a sustained effort to disentangle them, and if the lines do not crowd upon each other but are clearly enough defined to be followed with ease. The spacing should correspond in some degree to the natural intervals observed in reading aloud. Good spacing, like good punctuation, is an aid to ready comprehension of the subject matter, and may be likened to phrasing in music.

Certain established features of the printed book, such as title page, head-lines, and pagination, which

were adopted in the course of its development, were doubtless the outcome of considerations of convenience. The printers of some modern examples of fine printing, besides reverting to fifteenth-century models for their type, have also ignored these aids to the ready use of a book. Instead of a title page telling us frankly the name and author of the book and when and where printed, we are fobbed off with a brief title placed in bare isolation at the top of a page; the other credentials are hidden away at the end of the volume, and not infrequently have to be painfully spelled out from a maze of capitals. In these books head-lines are generally omitted, giving a decollated aspect to the page, suggestive of the binder's guillotine. Shoulder notes sometimes take the place of head-lines, though why these excrescences should be deemed preferable it is difficult to see. With the head-lines gone, the pagination is relegated to the foot of the page, a singularly inconvenient position. Another affectation which shews signs of creeping in is that of omitting to indent the first line of a paragraph. This renders the beginning of the paragraph indistinguishable from any other line, and if the end of the preceding paragraph should happen to occupy the full extent of its line there is nothing to indicate the break. A craving for doing something different and a certain amount of preciosity may have prompted some of these deviations from

what has been found by experience to be generally convenient. But it is much easier to criticize than to attain perfection, and the best work done in recent years both at private presses and by the leading business printing houses is worthy to be placed beside the best work of the fifteenth century, and there is little else in the interval to rank with them.

CHAPTER VII

THE CONSTRUCTION OF A BOOK

In setting out to convert the manuscript copy of any work into a printed book a number of questions at once arise. Chief among these are the format (shape and size) of the book; the kind of type to be used; the quality of the paper; the illustrations, if any; the number of copies to be printed; the binding; and, if it is to be offered for sale, the price at which it shall be published. All these matters are interdependent, and affect each other in various ways.

One of the initial questions is, what shall be the format of the book? Many considerations go to the settling of this important point. The use to which the book is intended to be put; the subject matter; the extent of the manuscript; and even the illustrations, if any, which are to accompany it, or, as now too frequently happens, which it is to accompany. The common designation of the size of a book as folio, quarto, octavo, or duodecimo (in abbreviated form: fol., 4to, 8vo, 12mo) is not an indication of actual measurement, but of the number of times the full sheet of paper is folded after it is printed off. Thus,

folio indicates that the sheet has been folded in half once, making two leaves; quarto, folded twice, making four leaves; and octavo, three times, making eight leaves. In a duodecimo the sheet is folded so as to make twelve leaves, and this forms a book that is somewhat narrow in proportion to its height.

It will readily be observed that it is the size of the full sheet of paper which fixes the actual dimensions of the book, and that a quarto or octavo may vary according to the size of the sheet used. There are some nine or ten sizes of paper in general use, the commonest being foolscap, crown, demy, and royal. To indicate more precisely the dimensions, both the size of sheet and the folding (*e.g.* demy 8vo, crown 4to) are mentioned in the ordinary description of a book. The approximate measurement in inches of the commoner sizes of page is as follows:

	Quarto	Octavo
Foolscap	$8\frac{1}{2} \times 6\frac{3}{4}$	$6\frac{3}{4} \times 4\frac{1}{4}$
Crown	$10 \times 7\frac{1}{2}$	$7\frac{1}{2} \times 5$
Demy	$11 \times 8\frac{3}{4}$	$8\frac{3}{4} \times 5\frac{1}{2}$
Royal	$12\frac{1}{2} \times 10$	$10 \times 6\frac{1}{4}$

As a guide to the binder in arranging the folded sheets in correct sequence a letter or number (as in this volume) is printed at the foot of the first page of each sheet. These signatures, for so they are called, afford, in general, a ready means of

ascertaining the format of a book. To do this, count the number of leaves from one signature to the next; a signature will usually be found on page 17, or page 25. If there are four leaves, the book is a quarto; if eight, an octavo; twelve, a duodecimo, and so on.

For a folio book this method will not serve; since, for the sake of convenience in binding, two or more sheets are inserted into each other, like a section of ordinary note-paper. In this case, as also in the case of many early printed books which have no printed signatures, assistance can be obtained from the watermark, that is, the semi-transparent device found in almost every sheet of all except modern paper. By holding a leaf up to the light the position of the watermark can be observed. If it occurs in the middle of the page the book is a folio, and in this case it will be noticed that the chain lines (the semi-transparent lines an inch or more apart) in the paper run vertically through the leaf. If the watermark is in the middle of the inner margin and cut in half by the fold at the back of the book, with the chain lines horizontal, the book is a quarto. In an octavo the watermark will be found at the top of the inner margin of the page, with the chain lines vertical as in a folio. The determination of smaller sizes—12mo, 16mo, 24mo—is more complicated, and explanation may be sought in the more

elaborate bibliographical treatises. How it happens that the watermark occurs in these positions can be easily demonstrated by marking a circle in the middle of the first page of a sheet of note-paper and observing where the circle comes when the sheet is folded. This folded sheet will also shew why it is that, in books which have not had their edges cut in the process of binding, the top and some of the front edges have to be cut with a paper-knife before the book can be used.

If there are neither signatures nor watermarks visible, as happens in some early books, there is yet one other clue. Open the book and turn over the leaves until an opening is found where the thread of the sewing shews along the back between the two pages. This opening will be the middle of a sheet, and the number of leaves between this and the middle of the next opening where the thread shews in like manner, will be the number of leaves in a sheet. To many modern books none of these methods will apply. For, since large printing machines came into use, a greater number of pages can be printed at one operation than in the days of the old hand-press; and paper is now made in almost any size to suit the convenience of the printer. Moreover, neither watermark nor chain lines are to be seen in most modern machine-made paper.

Since the terms 'page' and 'leaf' are occasionally confused, it may be observed that a page is one side of a leaf, and a leaf may therefore have two pages printed upon it, one on each side. The first page of a leaf, the right-hand page of an open book, is called the *recto* of the leaf, and the second page, the left-hand page of the open book, the *verso*. When every page is numbered, the book is said to be paged; but when a number is given to each leaf only, the book is said to be folioed.

The selection of the type to be used for a book depends in great measure upon the size of the page and the amount of matter contained in the work. If the book is very long it may be necessary to use a small type in order to keep it within the desired compass, and other considerations will have to give way; but in many cases the choice is unhampered by this condition. To make a presentable book—one that shall in the general appearance of its page satisfy the eye, and at the same time be comfortable to read—the size of type must be carefully considered in relation to the size and shape of the page. The length of line, the number of lines to a page, and also the relative proportions of the margins have to be studied. The main thing to be aimed at is legibility. Too long a line of small type is trying to the eye, both in following the line and in picking up the next;

while large type closely crowded gives a confused effect and is almost as bad.

The proportion of the margins on the four sides of the printed page has an important influence upon the appearance of a book. These proportions are not equal, and they are not haphazard. If all the margins were of the same width, the printed page would appear to be both nearer the outer edge and lower down than its actual position, as if the print were slipping off the page. Experts in such matters tell us that the aesthetic unit is not a single page, but that the two pages shewn in one opening must be taken together, and that the margins to be of the correct width should be in the following relative proportions: upper, 1; lower, 2; inner, $\frac{3}{4}$; outer, $1\frac{3}{4}$.

The type used in books of to-day is usually one of three styles: Old Face, Old Style, or Modern Face. Specimens of these are shewn on the opposite page.

Besides these three styles of letter, other forms of type are occasionally used in book work.

A group of heavier faced types, generally called Antique, of which this paragraph gives an example, has met with some favour. In a small size it is certainly clearer to read than ordinary type, but in the larger sizes the letters do not sufficiently blend to make the word the apparent unit in the page, and the individual letters assert themselves to the eye in reading.

OLD FACE Type, shewn in this paragraph, is a revival of the type designed by William Caslon in the 18th century. It is sometimes referred to as Caslon letter. The capitals are rather heavy, and some of the lower-case letters, such as a and s, are somewhat cramped. The general effect is slightly spotty, but it has a pleasantly antique air.

OLD STYLE Type is a modification of Old Face type in a freer and more rounded form. The general appearance is harmonious without any marked contrasts. Both this and the preceding style may be distinguished from Modern Face by the serifs (the small projections at the top and bottom of the letters) not being at right angles to the main strokes.

MODERN FACE Type is shewn in this paragraph. In the first half of the 19th century it was employed almost exclusively, and it is still used in the majority of books. Its distinctive features are emphasis of the thick and thin strokes of the letters, and the precision and squareness of the angles. The general effect is mechanical and lifeless.

Modern face type differs also in the figures from the two other styles. Modern face figures

1 2 3 4 5 6 7 8 9 0

it will be observed, all stand on the line and are of the same height. When these figures are numerous and close together, as in a railway time-table, there is sufficient similarity between 1 and 4, 3 and 8, 6 and 9 to cause danger of misreading. But with figures of the other styles

1 2 3 4 5 6 7 8 9 0

there is not such risk, since each digit possesses an individuality of its own.

Each of the different styles of type is made in a number of standard sizes. Some of these sizes, with their names, are shewn in the following specimen lines. This book is printed in modern face small pica.

PEARL is the name of the size of old style type shewn in this line.

NONPAREIL is the name of the size of old style type shewn in this line.

BREVIER is the name of the size of old style type shewn in this

BOURGEOIS is the name of the size of old style type

LONG PRIMER is the name of the size of old style

SMALL PICA is the name of the size of old

PICA is the name of the size of old style

ENGLISH is the name of the size of

GREAT Primer is the name of

The old arbitrary sizes, with their traditional names, are fast giving way to the American point system, in which the various sizes, proceeding by a regular scale, bear definite relation to one another. A line of Pica, the standard unit of the old notation, measures in height one-sixth of an inch, and is equal to twelve points of the new scale. The point system has substantial practical advantages, nevertheless it is a pity that the picturesque nomenclature of the old series must disappear.

When the lines of type in a page are set close together without any space between them, they are said to be 'solid.' Sometimes the lines are slightly separated by means of thin strips of metal, called 'leads,' placed between them; the type is then said to be 'leaded.' A moderate sized type leaded is often pleasanter to read than a large faced type set solid; though votaries of the book beautiful would probably declare for the 'all-overish' appearance of the large type. A page of leaded matter contains fewer lines than a similar page of solid matter. The difference caused by leading out is exemplified in pages 84 and 85. Page 84 is set solid and contains thirty-two lines; while page 85 is thick leaded and contains only twenty-five lines. The other pages of this book are thin leaded.

Leading may be adopted either to improve the look of the page, or to make it more legible, or, yet

again, in order to spin out the book to a greater number of pages. For a book of poems or choice essays leading the lines and general spacing out is quite allowable and may produce a pleasing effect. The practice, in a less legitimate form, may not infrequently be observed in certain novels and volumes of short stories, the appearance of which is familiar to most readers. Outside, the book is like unto other six-shilling novels. But on opening it, it is seen to be printed in large type, and the short lines which leave more than ample margin are heavily leaded; blank pages abound at the beginning and are introduced between the chapters and at every other opportunity; and, by printing the book on thick spongy paper, the attenuated matter is padded out to simulate an ordinary novel of a hundred thousand words. If it be a volume of short stories, it quite possibly practises the further deception of appearing under the title of the first story only, as though it were a whole novel of that name.

On making the acquaintance of a book we usually look first at the title page—hardened novel readers go straight to page 1—for there we expect to find some account of its scope and character, just as we scan the face of a person for some indication of his personality. In this important page the book tells us, or should do so, its name, subject, author, where and by whom published, and, if it be honest, the date

of publication¹. To express the scope and aim of a book concisely, clearly, and amply within the compass of a dozen words may tax the author's ingenuity; but to marshal these few words into an artistic and successful title page is no less a test of the printer's skill. The composing of a really good title page is, indeed, one of the most difficult tasks in the whole craft of printing. Above all, a title must not be garrulous and straggle down from top to bottom of the page; nor should it be cryptically reticent. A satisfying title page tells its tale at once, like a well-composed picture, with the component parts carefully balanced and grouped into an harmonious and organic whole.

In printing a book it is customary to start with the beginning of the text of the work, leaving the title and other 'preliminary matter' to be printed last. The preliminary matter includes the half-title (or bastard title), the title page, preface, and lists of contents and illustrations. Corrections of proofs may, if numerous or extensive, entail considerable expense, and it is therefore desirable that they should be kept within the narrowest possible limits. This can be done in two ways: first, by carefully

¹ Nowadays the date of publication, together with the dates of previous editions of the work, are often printed on the verso of the title page. It is more satisfactory to have the date on the title page itself; but it is the entire suppression of the date that is to be condemned.

revising the manuscript for the printer, attending to punctuation and capitals, and marking clearly new paragraphs and other sections. It is a common excuse for neglect, to say that the printer will see to all that. But it cannot be considered the printer's duty to act the part of revising editor; and, besides, to send in a carelessly written and ill-prepared manuscript is most inconsiderate, and extremely unfair to the compositor, to whom it is a loss of time and money to have to puzzle out an illegible scrawl and to phrase out paragraphs devoid of punctuation marks.

The second method of avoiding unnecessary expense in the correction of proofs is to be careful of the way in which alterations are made. Each letter of type consists of a small block of metal, rather less than an inch high, with the letter in relief on the end of it. Each of these letters occupies a definite portion of the length of the line: an m takes more room than an i, and a t is narrower than a w. Between each word is a 'space,' that is a narrow piece of metal like the shank of a letter but not so high. Being lower than the face of the letters the 'spaces' do not get inked, and therefore leave the necessary intervals between the words. These spaces also facilitate small corrections in proof. For instance, if 'when' has to be substituted for 'and' in a line, the four letters can probably be inserted in place of the three by slightly reducing the spaces between some of the words. The converse can be effected by increasing the spaces. But to add or to cut out one or more words it may be necessary to 'overrun' (that is, to alter the contents

of) several lines, and this means a certain amount of trouble, time, and expense. Overrunning can sometimes be avoided by adding words of similar length to those deleted, or by cutting out words to make room for those which have to be inserted. This is not of so much importance when the correction is near the end of a paragraph, unless it will alter the number of lines.

If corrections are likely to be extensive, proofs are generally sent out in slip form, that is, in strips before being made up into pages; because, after the type is put into pages, alterations which involve the transfer of lines from one page to another are troublesome to effect. It is when the proof is in pages that the head-lines (the descriptive line at the top of the page) are added. These usually consist of the short title of the book on the left-hand page, and on the right-hand page the title of the chapter or the subject matter of the page itself. To have merely the title of the book running on both pages throughout the volume is a slovenly practice and suggests careless indifference on the part of both author and publisher. The head-line too is the right, because convenient, place for the page numbers, and not the bottom, where they look as if they had strayed out

of the page and were trying to escape observation. Why the first page of a chapter should generally be denied its head-line and page number is one of those hidden secrets known only to those who follow 'the mystery and art of printing.'

At the end of the book comes the Index, an appendage which does not always receive the attention it deserves. 'The labour and patience, the judgment and the penetration which are required to make a good index, is only known to those who have gone through this most painful, but least praised part of a publication,' was the considered opinion of the eighteenth-century bibliographer William Oldys; and yet earlier Nicolas Antonio, the Spanish bibliographer, related as the dictum of a celebrated compatriot, 'that the index of a book should be made by the author, even if the book itself were written by some one else¹.' With the exception of cyclopaedias and dictionaries, almost every book that aims at being useful requires an index to make its store of knowledge accessible. More than one treatise has recently been devoted to the principles of making a good index. Here it must suffice to say that, unless there are special reasons to the contrary, it is better to have but one index than to make separate lists for persons, places, and things. The references should be to individual

¹ H. B. Wheatley: *What is an Index* (1878), p. 18.

points and should not be classified under headings; in the alphabetical arrangement each word must be considered a unit. The use of a dash for repetition at the beginning of an entry should be confined, if used at all, to words having precisely the same meaning.

The material upon which books are printed is nearly always paper, but occasionally vellum is used. The 'rag-books' of the nursery are another variant. In the early days of printing, when manuscripts were commonly written upon vellum, it was natural that that material should frequently be employed for some copies of a printed book. But even at that time this was exceptional, since paper was in comparison much cheaper, and the large supplies of vellum necessary for whole impressions of a book would be difficult and expensive to obtain. In some instances certain parts of a book liable to hard usage, such as the leaves of a missal containing the canon of the mass, were printed on vellum. In modern times this material is but seldom used, and then only for two or three copies produced for the gratification of the collector who delights in the fact that his copy is one of '*only* three' in existence on vellum, quite regardless of the other fact that his precious copy with its greasy-looking print is inferior in comeliness and comfort to a good paper copy.

The manufacture of paper is said to have been carried on in China in the early part of the second century of the Christian era, and was practised by the Arabs before the end of the eighth century. In the eleventh century the Moors introduced it into Spain whence it spread through Europe. In former days paper was made almost exclusively from rags; but in modern times, and more especially since the abolition of the Paper Duty in 1861, the material which goes under the name of paper is manufactured from various other things, including wood pulp, esparto grass, and straw. Wood pulp forms by far the largest proportion of the materials used, but the best paper continues to be produced from rags, for which no entirely satisfactory substitute has yet been found. Until about a hundred years ago all paper was hand-made, each sheet being separately formed in a shallow frame like a fine wire sieve. At the present time the most recent of huge paper-making machines can turn out paper in the form of a continuous roll at the rate of six or seven miles an hour. But the best paper is still made by hand, though it comprises only an insignificant fraction of the whole manufacture.

Paper used in the printing of books may be either laid or wove. Laid paper can be distinguished by the wire marks: semi-transparent lines running close together in one direction, with heavier lines about an

inch apart at right angles. Wove paper, on the other hand, shews a uniform texture when held up to the light. Both these kinds of paper are manufactured in an almost endless variety of quality, tint, and thickness. The strength of a paper depends not so much upon its thickness as upon the quality of the fibre of which it is composed. The thick spongy paper upon which novels are frequently printed is made from aerated pulp, on the same principle as an egg or a basin of cream is whisked up by the cook. This paper has, naturally, little strength, and books made of it begin to fall to pieces as soon as they reach the reader's hand. The so-called 'art paper,' with its shiny surface so trying to the eye and disagreeable to the touch, is made by coating the paper with a preparation of china clay and glue which gives a solid even surface and is therefore much used for process illustrations. If a book printed on this paper gets damp the leaves stick together and cannot be separated without irreparable damage; and if the volume gets thoroughly wet it becomes practically a solid block. With the object of bringing books within small compass the use of very thin paper is frequently resorted to, and the necessary qualities of strength and opaqueness have been combined with extraordinary success in the India paper now so largely used.

The number of copies of a book printed at any

one time is called an edition or impression. An edition may consist of any number that it is decided to print. When an unusually small number is printed, attention is generally called to the fact as enhancing the value of the book, and sometimes the copies are numbered consecutively. The description 'limited edition' now often used in a vague and specious way, is a loose term of no value whatever, as every edition must be limited, even the mammoth editions of 100,000 copies which have been printed of some popular novels: there can be no such thing as an unlimited edition. When the demand for a book is expected to exceed the number first printed, the type is sometimes kept standing in readiness for a further impression; but if the work is of a nature not to require much amendment or alteration it is more usual to make stereotype plates from which additional copies can be printed, in order to set free the type for other work.

To distinguish between a mere verbatim reprint of a book and a reprint in which the work has undergone some revision, the terms 'impression' and 'edition' respectively are sometimes used. It would be a decided advantage if this practice were uniformly adopted. When a portion of an impression is published in a form differing from the original issue it is called a re-issue. Sometimes, and not altogether honestly, it is passed off as a new edition.

Another form of republication to be deprecated is the issue of a novel in book form under a different title from that which it carried while appearing as a serial story in a periodical publication.

The anastatic process, sometimes resorted to as a cheap method of making reprints of a book, is happily less in favour in this country than on the continent. In this process the ink from the page of an original copy is transferred to a zinc plate which is then, by treatment with acid, converted into a surface from which impressions can be taken. The result is, however, anything but satisfactory, for these reprints, full of imperfect letters, have a wretchedly feeble appearance and are irritating to read.

Occasionally a few copies of a book are printed on larger paper than the rest of the impression, and sold at a fancy price. But these 'large-paper' copies, which shout so loud in booksellers' catalogues, are cumbersome things with an overgrown, purse-proud look, and are infinitely less desirable than copies with the right proportion of margin printed on better paper than that used for ordinary copies.

Illustrations and binding, both of which are important elements in the construction of a book, form the subjects of separate chapters.

CHAPTER VIII

ILLUSTRATIONS

Until recent times the chief methods of producing illustrations for printed books were woodcutting, metal engraving, etching, and lithography. But during the last five-and-twenty years the province of every one of these arts has been invaded by photography; and the various processes by which illustrations in black-and-white and in colour are now produced are bewilderingly numerous. All these methods, whether handicraft or mechanical, may be divided into three groups distinguished by the nature of the surface of the block or plate from which the picture is printed. In the first of these the design is in relief, and, in printing, it is impressed into the paper. To this group belong woodcuts, wood engravings, and some of the modern mechanical processes such as zinc etchings and half-tone blocks. In the second group the lines composing the picture are sunk below the surface of the plate, and, in printing, the paper is pressed into these lines, so that the picture is in low relief upon the surface of the paper. By this, the *intaglio* method, are produced copper-plate and steel engravings, and certain

of the photographic processes such as photogravure. The third group comprises pictures printed from flat surfaces, and includes lithographs and, again with the aid of photography, collotypes.

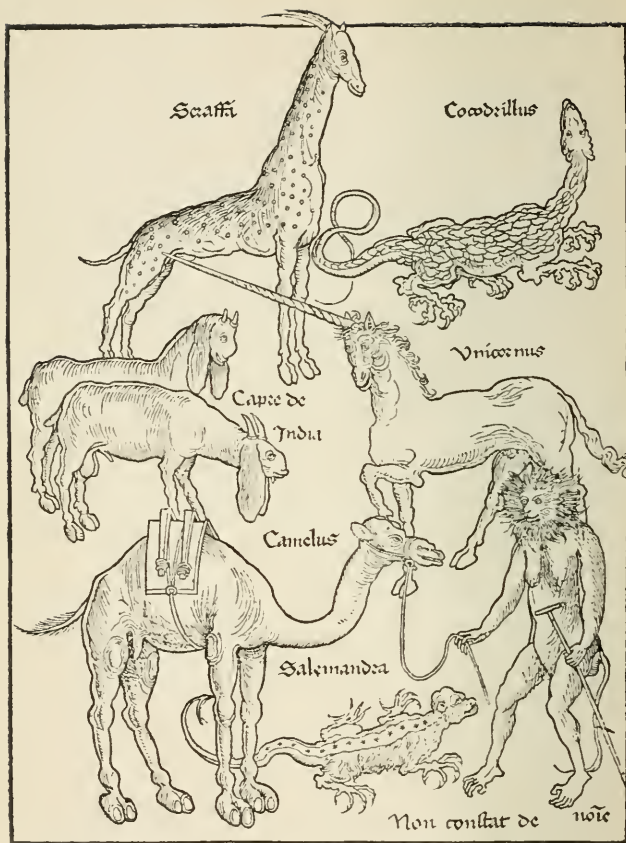
Although the printing of pictures from wood-blocks preceded the invention of typography, the printer of books in movable type did not at first make use of the art of the engraver—or woodcutter, as the maker of early woodcuts should perhaps be called—to illustrate the printed book. In fact, in its beginnings, the printed book had more affinity with a manuscript than with either the woodcut picture or the block-book, and it was to the illuminator that the early printer naturally turned for the decoration and illustration of his productions.

It was not long, however, before the printer perceived that the woodcutter's art might, with advantage, be utilized for the adornment of his books; and that, not only for decoration in the shape of initial letters, borders, and other ornamental adjuncts, but also for pictures which would elucidate the text or add to the attractiveness of popular works. These woodcuts consisted of a flat block of wood upon which the design was drawn and the surface of the wood afterwards cut away so as to leave the lines of the drawing in relief. Occasionally soft metal was used in place of wood. The height of the block being adjusted to that of the type, the

picture or ornament could be printed in one and the same operation as the page of text.

The first printer to make use of illustrations was Albrecht Pfister, of Bamberg, who about 1461-2 issued several popular German books containing woodcuts. But the history of illustrated books does not properly commence until some ten years later when pictures begin to make their appearance in books printed at Augsburg, where there existed a guild of craftsmen who cut blocks for printing playing-cards and pictures of saints, for both of which there was at that time a large demand. Ulm, another important centre of woodcutting, followed the lead of Augsburg, and the practice soon spread: Nuremberg, Cologne, Strassburg, and Mainz being among the chief German towns which produced illustrated books in the fifteenth century.

Copyright was as little recognized in pictorial art as in the world of letters, and a successful illustrated book was quickly copied or imitated, generally in other towns than that of its origin. The *Aesop*, printed by Johann Zainer at Ulm and containing two hundred woodcuts, was followed by half-a-score other German editions, most of which were frankly copies; and the popular *Narrenschiff* (*Ship of Fools*) of Sebastian Brant, first published at Basel by Johann Bergmann von Olpe, in 1494, with over one hundred illustrations, was paid the compliment of being



Hec animalia sunt veraciter depicta sicut vidimus in terra sancta

From Breydenbach's *Peregrinationes*
Mainz, 1486. (Reduced)

reprinted in three other towns in the same year. Sometimes the pirated cuts were mere slavish imitations of the originals, perhaps copied by pasting one of the original pictures on the wood-block, in which case the copy would appear in a reversed form in the new book and so betray its origin. But the object was easy reproduction of pictures rather than fraudulent imitation, and details were freely paraphrased. Copies by a poor craftsman would shew a distinct inferiority to the originals; but in the hands of a capable artist the new version might be a great improvement both in the handling of the subject and in technical execution.

The illustrations in Breydenbach's *Peregrinationes in Montem Syon* (Mainz, 1486) shew a marked advance upon previous efforts in the art of wood-cutting. The book also possesses a modern touch in that the illustrator, Erhard Reuwich, joined the pilgrimage as special artist to the expedition; but the page of animals 'veraciter depicta sicut vidimus in terra sancta' includes a salamander, a unicorn, and a baboon leading a camel. Shortly after this two of the most noted illustrated German books made their appearance at Nuremberg from the office of Anton Koberger: the *Schatzbehalter* of 1491, and Hartmann Schedel's *Liber Chronicarum* of 1493. Michael Wohlgemuth was the artist responsible for the cuts in both. The latter, usually called the

Nuremberg Chronicle, and perhaps the best-known illustrated book of the fifteenth century, has elbowed its way to the front by sheer bulk and a blustering profusion of woodcuts, many of the portraits being repeated over and over again for different persons¹. The *Schatzbehalter*, with its full-page pictures, each with a story to tell, is really the more attractive book.

Italy was somewhat later in adopting illustrations. The *Meditationes* of Turrecremata, printed at Rome by Ulrich Hahn in 1467, is the first Italian book in which woodcuts occur; but much better work may be seen in the eighty-two cuts which illustrate the edition of the *De re militari* of Valturius printed at Verona in 1472. Erhard Ratdolt, who printed at Venice from 1476 to 1485, is celebrated for his beautiful borders and initial letters; and a few books with pictures appeared both at Venice and other towns during that period. The use of woodcuts did not, however, become common in Italian books until about 1490, in which year Lucantonio Giunta published at Venice the first illustrated edition of Malermi's Italian version of the Bible. Some of the cuts in this book—there are nearly four hundred of them—were adaptations from the German Bible

¹ An enumeration of the cuts shews that the book contains 1809 pictures printed from 645 different blocks. See A. W. Pollard: *Fine Books* (1912), p. 117.

printed at Cologne by Heinrich Quentell some ten years earlier.

The most remarkable Italian illustrated book of the fifteenth century was the *Hypnerotomachia Poliphili* of Francesco Colonna, which Aldus, who was not given to the use of pictures, printed for Leonardo Crassus in 1499. This fine folio in its rich array of graceful and well-executed woodcuts is a striking contrast to the little Savonarola tracts and *Rappresentazioni*, or miracle-plays, which form the most characteristic illustrated productions of the Florentine press. These popular booklets, with their charming little woodcuts generally surrounded by a border having a white design on a black ground, had a vogue which lasted from 1490 to the middle of the sixteenth century.

In Paris, a stronghold of the trade in manuscripts, the printing press ousted the scribe less easily; and it was here, more than in most other places, that the printed book kept touch with the art of the illuminator. This is specially observable in the *Horae*, or Books of Hours, of which innumerable editions were printed in France between 1486 and the middle of the sixteenth century. In these books nearly every page is surrounded by an elaborate border, generally made up of small pictures enclosed by intertwining foliage or other decorative framework. The subjects may be either Old Testament

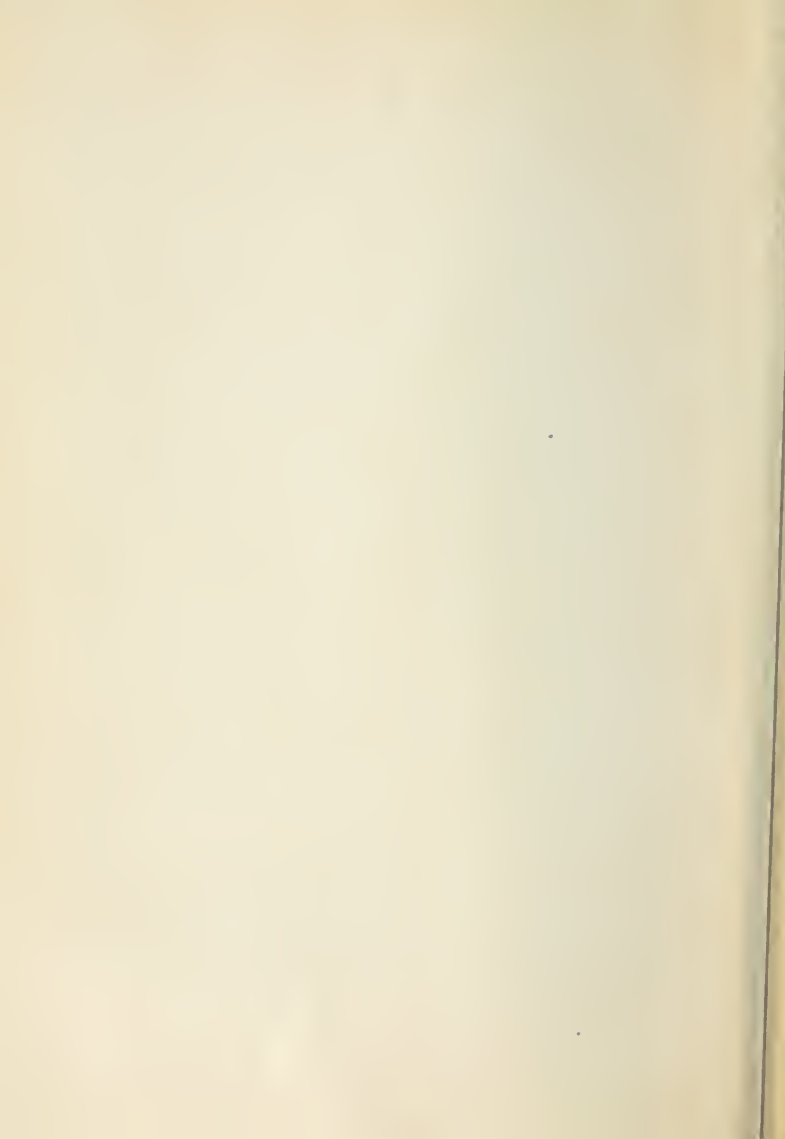
types, biblical scenes, histories of saints, the dance of death, or even rural scenes and daily occupations. The small pictures were frequently on separate blocks, and so lent themselves to an almost infinite variety of combinations. Besides the borders, a larger picture, occupying nearly the whole page, was placed at the beginning of the several sections of the work, each of which had its appropriate subject. Many copies were printed on vellum, and the borders and pictures were often gilded and coloured in the style of manuscripts by an illuminator, who, when occasion demanded or fancy prompted, would overlay the printed ornament or picture with some entirely different design.

Some of the best of these books of private prayers are among the editions printed at Paris by Philippe Pigouchet for Simon Vostre during the twenty years from about 1490. Other prominent printers and publishers of them were Jean du Pré, Thielman Kerver, Gilles Hardouyn, and Antoine Vérard. The last of these was one of the greatest of the early French publishers, and his numerous books are freely illustrated with cuts both new and old. In the *Horae* (1525) of the artist-printer Geoffroy Tory the tradition of manuscript decoration is no longer dominant and the ornamentation is in full Renaissance style.

The early English press is not remarkable for its illustrations or its decorative qualities. Such pictures



From Pigouchet's *Horæ*, 1498. (Reduced)

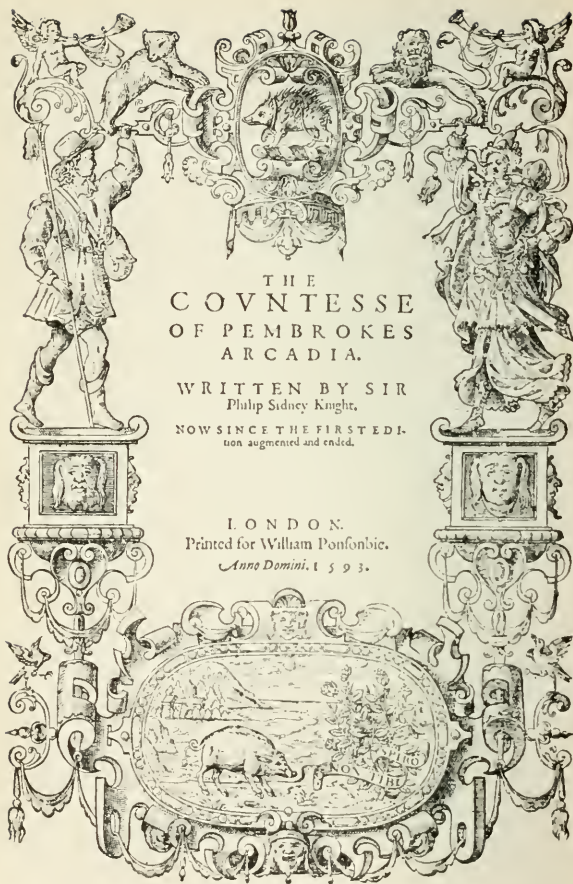


and ornaments as were used were mostly either imported from the continent or derived their inspiration from foreign originals. The first English books in which woodcuts occur are *The Mirroure of the World* and the third edition of the *Parvus et Magnus Cato*, both of which were printed by Caxton about 1481. Caxton used illustrations in several other books, notably the second edition of the *Canterbury Tales*, in which the designs were at least of English origin, the *Fables of Esope* (1484), turned into English by Caxton himself and illustrated by one hundred and six pictures, and the *Golden Legend*, the largest and most ambitious of all his books.

Wynkyn de Worde used woodcuts more freely than Caxton, but he seems to have valued them rather as adding to the commercial attractiveness of the book than as illustrating the text. Among the more prominent of his illustrated books are the fine folio edition of the *De proprietatibus rerum* of Bartholomaeus Anglicus, and the *Morte d'Arthur* of 1498. Several of his small quartos have woodcuts, and he also printed a *Sarum Primer* with borders to every page and a number of small cuts. Pynson, like Caxton and De Worde, also issued a pictorial edition of the *Canterbury Tales*, but his illustrated books are better represented by the 1494 edition of Lydgate's *Falle of Princes* and the *Kalendar of Shephardes* of 1506, though, it may be noted, the cuts

in both are of French origin. The woodcuts, upwards of one hundred, in Barclay's English version of the *Ship of Fools*, which Pynson printed in 1509, are copies of those in the original Basel edition of 1494; sixty years later they were resuscitated for the edition which John Cawood published in 1570.

In the sixteenth century the talents of the foremost artists found expression in the service of the printed book, and the illustrations of that period still rank with the best ever produced. Dürer, the greatest of these artists, served an apprenticeship to Wohlgemuth in his native town of Nuremberg. Hans Burgkmair, his contemporary, was of the celebrated art centre at Augsburg, as was also Hans Holbein, whose chief work was done at Basel; while Lucas Cranach made his home at Wittenberg. Jost Amman, best known by his clever delineations of trades and occupations in Schopper's *Panoplia* (Frankfort, 1568), belongs to the second half of the century; and at the end of it Theodore de Bry and his sons were bringing out at Frankfort their wonderful series of illustrated travel books. Some of these artists, and notably Holbein, also designed book decorations in the form of initial letters and the beautiful borders which are characteristic of sixteenth-century title pages. In the latter part of his career Pynson frequently placed his title pages within ornamental borders, of which he possessed some good designs. This feature also



THE
COUNTESSSE
OF PEMBROKES
ARCADIA.

WRITTEN BY SIR
Philip Sidney Knight.

NOW SINCE THE FIRST EDITION
augmented and ended.

LONDON.
Printed for William Ponsonbie.
Anno Domini. 1593.

Title page with woodcut border
Sidney's *Arcadia*, 1593. (Reduced)

appears in the books issued by the first Cambridge press; and the border on the title page of the present volume is, with the exception of the coat of arms, a reduced copy of that used by John Siberch in 1521. From this date bordered title pages become increasingly common in English books, though illustrations were by no means freely used. Foxe's *Book of Martyrs* (1563) was one of the most popular illustrated books of the time, and John Day, who printed it, also brought out *A Booke of Christian Prayers*, commonly called Queen Elizabeth's Prayer Book. This book, which has a pictorial border to each page after the manner of the French *Horae*, is a curious revival and the only English representative of that style.

The sixteenth century saw the woodcut at its best; but by the middle of the century a rival craft was beginning to assert itself. The art of metal engraving had occasionally been used for the illustration of books as early as the fifteenth century, but its sporadic employment in this connexion in no appreciable degree threatened the early supremacy of the woodcut, which held its own, aided, no doubt, by the fact that it could be printed with the text. But copper-plate engraving, which appealed to the artist-engraver as a more sympathetic vehicle for rendering half-tones and shadow, steadily won its way, so that by the end of the sixteenth century it

had nearly displaced the woodcut, which then practically disappears for the next two hundred years.

The effect of the use of metal engraving for book illustration was more than a mere change in the method of producing the pictures. It involved changed relations between text and illustrations, and resulted in a loss of homogeneity in the printed book. Metal engravings belong, as has already been mentioned, to the *intaglio* group of processes, and, since they require a different kind of printing machine, cannot be printed at the same time as the letter-press. Consequently, it will be found that the illustrated book of the seventeenth and eighteenth centuries possesses certain new features.

Sometimes, and more particularly in the case of fine books, the engravings were printed in blank spaces left for that purpose in the page of text, or were printed on thin paper and pasted into their places on the page. But since it was less trouble to print the engravings apart from the letter-press, they were usually worked on separate sheets of paper which were afterwards inserted between the leaves of the book or gathered together at the end of the volume. In this form, familiarly known as 'plates,' the illustrations are no longer an integral part of the printed book. This practice was further encouraged by the circumstance that the inferior paper which had come into general use was unsuit-



Engraved title page

Bacon's *Instauratio Magna*, 1620 (Reduced)

able for the printing of line engravings. The wood-cut border to the title page also disappears, and, instead, the book is 'adorn'd' with an engraved title page in which the brief title of the work is more or less lost in an elaborate design, frequently consisting of architectural features or heavy draperies in combination with allegorical figures and other 'properties' deemed appropriate to the subject of the book. An engraved portrait of the author was an obviously suitable *vis-à-vis* to the engraved title page.

Among English books illustrated with metal engravings Sir John Harington's version of *Orlando Furioso* (1591) containing forty-six full-page pictures is one of the best examples of that period. During the seventeenth century pictorial illustrations were used very sparingly in this country, and the popular engravers, among whom were Elstracke, Marshall, Faithorne, and Hollar, were largely occupied upon title pages and portraits. The succeeding period produced nothing in England corresponding to the delicate engravings of the French *livres à vignettes*, which are the outstanding feature of eighteenth-century book illustration. Hogarth's genius impressed itself on the native art, while French influence found expression in Gravelot's work, such as the plates to the *Pamela* of 1742. In another direction activity in antiquarian, architectural, and topographical research resulted in the production of many

large volumes on these subjects illustrated with fine engraved plates. In the latter part of the century Thomas Stothard, a prolific book illustrator of inventive fancy, was busy with plates for *Robinson Crusoe*, *Clarissa Harlowe*, *Tristram Shandy*, and many other English classics.

Woodcuts had continued to be used occasionally in chap-books and other forms of popular literature; but, as they were generally either battered and hard-worn veterans of an earlier age or debased copies of old cuts, they contributed nothing to the survival of the art, which remained under a cloud until its revival at the hands of Thomas Bewick, whose illustrated editions of Gay's *Fables* (1779), *Select Fables* (1784), and *General History of Quadrupeds* (1790) mark a new era in book illustration. The fresh life which the genius of Bewick and his followers infused into their art was more in the nature of a new development than a mere revival. New methods and principles were introduced, and henceforth we speak of the craft as 'wood engraving' in place of the old term 'woodcutting.' The great technical skill and delicacy of effect which the wood engravers attained brought their art once more into favour and raised it to the position of a distinctively English school of illustration.

In the nineteenth century the use of illustrations in books of every kind greatly increased. Although

wood engraving was the principal process employed, all the other methods of pictorial reproduction continued in use, their number being augmented early in the century by the introduction of lithography. This new art, in which the design is either drawn upon or transferred to the face of a specially prepared stone which forms the printing surface, was for some time very popular, though it was carried to finer perfection in France than in this country. Soon after 1830 the field for wood engraving was enlarged by the use of illustrations in weekly journals, and additional importance was given to this movement by the founding of the *Illustrated London News* in 1842. Steel engravings of a very fine quality were a special feature of *The Keepsake*, *The Book of Beauty*, and other 'Annuals' which flourished in the second half of the century. They also formed the *raison d'être* of many volumes of 'Tours' and 'Scenes,' such as Tombleson's *Views of the Rhine* and Tillotson's *Beauties of English Scenery*.

From Bewick and his contemporaries, Stothard, Blake, and Flaxman, the procession of notable book illustrators—artists and engravers—goes on in unbroken succession and variety. Cruikshank, Hablot Browne ('Phiz') illustrator of Dickens, Ainsworth, and Lever, with John Leech, of *Punch* fame, are foremost in the first half of the century. The stirring pictures of Sir John Gilbert and the 'rural

beauties' of Birket Foster, translated in wood by the brothers Dalziel, were the delight of the mid-Victorians; while in the 'sixties' a group of artists, of which John Millais, Frederick Walker, and Arthur Houghton were leaders, contributed to *Once-a-Week*, *Good Words*, *Cornhill*, and other magazines illustrations which are regarded by some as the high-water mark of pictorial design rendered in woodcut. The colour-books of Walter Crane, Kate Greenaway, and Randolph Caldecott, each with their distinctive genius, mark the succeeding period; and in the wonderful 'nineties' the *Yellow Book* episode had its passing hour.

The *English Illustrated Magazine*, founded in 1883, was a brave effort in the cause of wood engraving, and some of the most delicate and beautiful work in this art is to be found in its earlier volumes and in the *Century Magazine* and *Harper's Magazine*. But, in the last decade of the nineteenth century, wood engraving with its rivals, metal engraving, etching, and lithography all met their fate as methods of book illustration in the onset of mechanical photographic processes for reproducing drawings and pictures. In the palmy days of wood and metal engraving the engraver shared honours with the artist whose designs he interpreted through the medium of his craft; but in these new processes the middleman is dispensed with, and we get a

direct reproduction of the work of the artist. This difference, though important, was not the main element in effecting the revolution. Both engraving and etching are slow and laborious arts, and consequently expensive. On the other hand, the photographic processes are, by comparison, expeditious and cheap, qualities which give them an overwhelming advantage in meeting the requirements of the present day.

Nearly all these process methods of reproduction have photography as their basis, and, like their prototypes, may be classed in three divisions: relief, *intaglio*, and flat surface, according to the nature of the printing face. Only the first of these, which, like type, has the design in relief, can be printed in the same way and at the same time as the text of the book. The others are printed by a different operation, and the pictures produced by them, when used for book illustration, are usually added to the book in the form of plates.

The class of work reproduced by impressions from blocks in relief falls into two divisions: (1) Line etching, which is suitable for designs or pictures consisting of lines, such as line drawings and wood engravings; (2) Half-tone, which is used for wash drawings, photographs, and other pictures composed of tones in light and shade.

In Line etchings, sometimes called zincographs,

the design to be reproduced is transferred by photography to a zinc or copper plate the face of which has been coated with a preparation sensitive to light. After further treatment to fix the design the plate is exposed to the action of acid which eats away that part of the surface not covered by the design. The picture is thus left in relief on the face of the plate which can then be printed from in the same manner as a woodcut.

It is obvious that in printing from a relief block those portions of the face of the block which come in contact with the paper will produce corresponding solid marks on the paper, whether they be lines, dots, or larger portions of the surface. Since the marks thus made must be solid black, or one tone of colour if a coloured ink is used, tints and shades cannot be rendered by this method; though the effect of them is approximately attained in wood engraving by the use of lines graduated in thickness and distance from each other so as to produce the simulation of tint. The problem of reproducing pictures composed of tints and light-and-shade (and not of lines) was solved by the invention of the Half-tone process, sometimes called Meisenbach process, now in general use for illustrations in books and magazines. This process is similar to that of making Line etchings, but, in taking the photograph for transfer to the metal plate, a glass screen, closely ruled with fine

lines at right angles to each other, is interposed between the negative and the picture. The result of this is that the image on the negative is broken up into small dots which vary in size and density according to the amount of light reflected through the ruled screen by the different parts of the picture. The face of the plate and the resultant reproduction thus consist of a mass of minute dots which are not separately visible to the eye but by their varying texture give the effect of the tones of the original. This construction may readily be seen by examining one of these illustrations with a magnifying lens. In the lighter parts of the picture it will be noticed that the dots are small and distinctly separated by the white ground between them. In the middle tones the black and white are more nearly even, while in the shadows the texture becomes white dots on a black ground. In some of the coarser work used in newspaper illustration this effect may be detected without the aid of a lens.

In Photogravure and other *intaglio* processes it is the design itself that is exposed to the action of acid, and so is bitten into the surface of the plate which is then printed from after the manner of an etching. Collotype and Helio type are printed from a flat surface and are akin to the process of lithography, the prints being made from a prepared surface of gelatine instead of from a stone.

From the earliest days of book illustration the attraction of coloured pictures has found its votaries. Copies of books in which the illustrations have been coloured are of common occurrence in all periods, and generally this addition is contemporary work. Sometimes this was done by or for the owner, but in many cases books were issued by the publisher with the illustrations either plain or coloured. Initial letters printed in colour occur as early as Fust and Schoeffer's *Psalter* of 1457; and in the *Book of St Albans*, printed at St Albans in 1486, the heraldic shields are printed in colours. But until the eighteenth century little attempt was made to print illustrations in colours, and most of the colouring was done by hand.

Several methods of producing coloured prints were brought out in the eighteenth century. Of these, coloured aquatint, that is, pictures produced by aquatint engraving and afterwards coloured by hand, is by far the most important so far as book illustration is concerned. For the first thirty years of the nineteenth century it was the chief process employed in this country, and most of the colour-books published by R. Ackermann during that period were illustrated by coloured aquatint plates. Chromo-lithography, which succeeded aquatint as the principal method of printing in colours, came into practical use soon after 1840, and in its early

stages was associated with the names of Day and Son and Owen Jones. Previous to this its parent process, lithography, had passed through various stages, including hand-colouring and lithotint, the latter familiar in illustrated books of about 1840, in which the whole picture, except the high lights, is covered with a yellow tint. The cheap children's books, which were printed in great numbers from the latter part of the eighteenth century, were mostly coloured by hand. For the last sixty years or so wood-block printing in colour has been much used for this class of book. The books of Walter Crane, Kate Greenaway, and Randolph Caldecott were produced by this method, and owe not a little of their artistic success to the skill of their printer, Edmund Evans, who excelled in this art.

The Three-colour process, now so popular for the reproduction of pictures or objects in colour for book illustration, is based on the half-tone process, and, like it, is a purely photo-mechanical method. The success of the older methods of colour printing was dependent in large measure upon the artistic skill of the craftsman, or artist as he might in some cases be called; but, except in the operation of actual printing, the three-colour process affords little scope for artistic craftsmanship. In printing three-colour work three half-tone blocks, representing the primary colours, are employed. The negatives for these

blocks are taken through filters of coloured glass or glass cells containing coloured liquid, in addition to the ruled screen. Each of these light filters allows only certain colours to pass through to the negative and stops the passage of all others. The colours of the original are thus automatically dissected and grouped in three categories representing approximately the yellows, the reds, and the blues, each of which is contained on a separate negative. Of the three process-blocks made from these negatives that representing the yellow tones is printed first in yellow ink, over this impression the red block is next printed, and finally the blue. The various colours and tints of the resultant picture are formed by the combination of these three colours printed over each other and varying in proportion according to the density of the printing surface of the respective blocks. The use of the right amount of colour and degree of pressure in printing are important factors in the success of the operation. It is also essential that the register should be absolutely accurate, that is to say the three impressions must follow each other in exactly the same place on the paper, or the result will be the blurred effect occasionally seen in cheap prints.

From the point of view of the printed book the introduction of process methods of illustration cannot be regarded as altogether fortunate. Too little

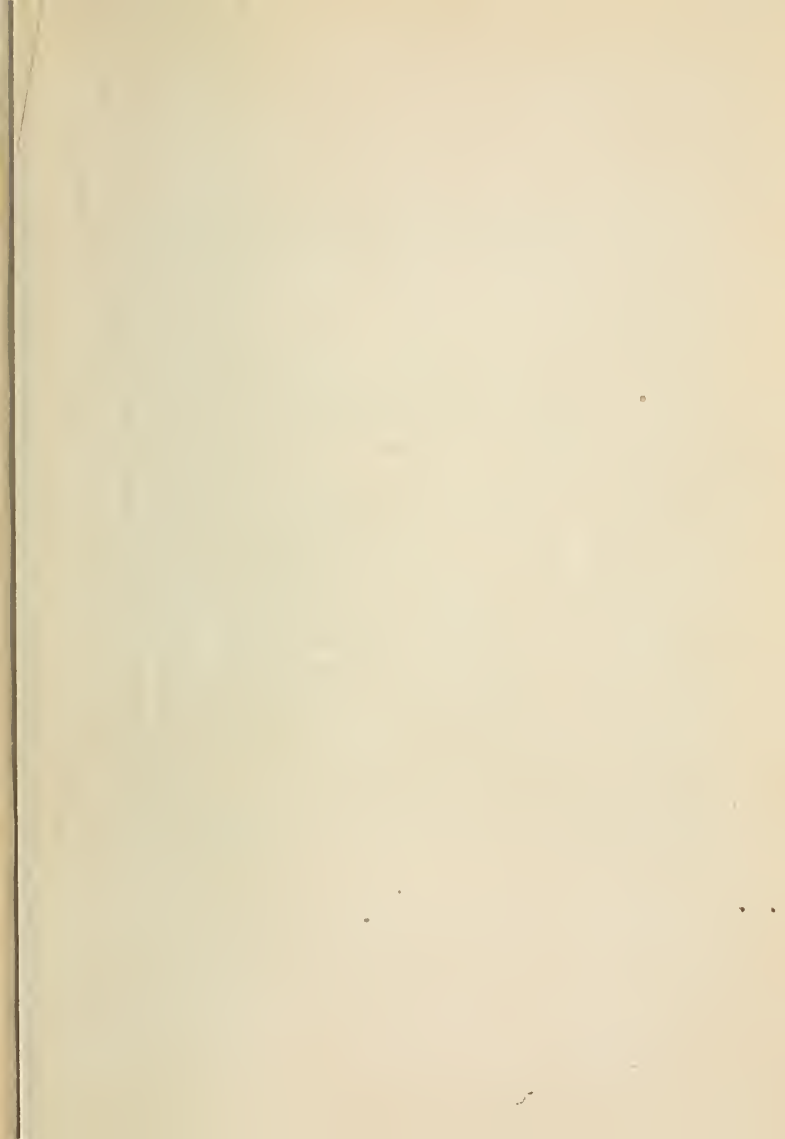
consideration is given to the manner in which the illustrations are associated with the printed page; and it rarely happens that a book gains anything as an example of typographic art from the process pictures with which it is illustrated. The arrival of the three-colour process has worsened matters; and the present riotous use of cheap colour illustrations is nothing short of a calamity. Any excuse serves for the addition of these coloured crudities, which, printed on shiny 'art' paper or dabbed on pieces of brown paper, are intruded between the leaves of the book almost at random. Little wonder that the outraged volume, taking advantage of its flimsy structure, endeavours to shed them at the earliest possible moment.

CHAPTER IX

BOOKBINDING AND BOOKBINDINGS

When books changed their form from the roll to the codex (that is, were folded into leaves) some kind of binding became a necessity. This for two reasons: to keep the leaves in their right order, and to preserve the outer leaves from damage. By the time the printed book made its appearance binding had been practised for a thousand years or so. Since the construction of a printed book was similar to that of a manuscript, the binding naturally followed the same model, and in essential details the subsequent four centuries have witnessed but little change.

The operations of bookbinding fall into two main divisions: forwarding and finishing. Each of these is considered a separate craft. The forwarder carries the work up to the point at which the book is covered with the selected material, be it leather, cloth, or other fabric; the finisher adds the lettering and ornamentation. The methods employed in forwarding a book have hardly differed in principle since the first days of printing, and it is mainly in the materials used for covering and in the decoration that the successive styles and fashions in bindings





A Bookbinder's Workshop in the Seventeenth Century
From Luiken's *Spiegel van het Menselyk Bedryf*

consist. This applies to what are properly known as 'bound' books, the work of which is a handicraft, and not to the cloth binding of everyday modern books, which is mainly a product of machinery and is known as 'cased' work.

The process of binding a book comprises a long series of operations, all requiring a nicety of handling and judgment to produce the perfect result. Of the principal stages the first consists in folding the sheets, or, if the binder receives them already folded, in seeing that this has been correctly done. The sheets must be so folded that the leaves come in their proper order and the pages of type all have the same relative margin. Next, the sheets are collated, that is, examined to see that they follow each other in right succession; and in this the binder is guided by the signatures, the small letter or number at the foot of the first page of each sheet. After being beaten, rolled, or pressed, to give it solidity, the book is ready for sewing. This work is done in a kind of frame, called a sewing press, the sheets being laid with their backs to a series of four or five upright cords round which the thread is passed on its way out and in along the back of each sheet. When the sewing is finished these cords stand out as horizontal bands across the back of the book forming panels as seen in most books bound in leather. A book sewn in this manner is said to be 'sewn flexible.' In an

inferior style of binding grooves are sawn into the back of the sheets and the cords lie in them, so that the thread merely passes behind the cords instead of going out at the back and right round them. In this case the cords do not form bands on the back, and the back may consequently be smooth, unless, as is frequently done, false bands are put on before the volume is covered. But the binder seldom makes the false bands correspond in position to the actual cords, and, since the discrepancy is readily seen where the cords shew at the hinges, he can generally be caught out. If it is desired to avoid having bands on the back the book can be sewn on tapes instead of cords; a much better method than sawing the back.

After the sewing is completed and the back has been glued up, the binder proceeds to the rounding and backing of the volume. The first of these processes gives the back a convex form and thus provides space for the extra thickness which that part of the book has acquired owing to the presence of the sewing thread; the object of backing is to make a groove into which the back edge of the boards may fit and form a hinge on which to open. Both these operations are done with a hammer, and call for considerable skill and care. A fashion for flat backs has obtained to some extent in recent years. In this style the rounding and backing are omitted, and what is called a French joint is used in attaching the boards.

These books have a certain neatness and compactness of appearance when new, but if much used the back is liable to become concave causing the fore-edge to protrude, and the volume takes on a painfully broken-backed aspect.

Boards, cut to the right size, are now attached to the book by drawing the slips (the free ends of the back cords) through holes in them, after which the cutting and decoration of the edges are taken in hand. The treatment of the edges allows considerable latitude of choice, and, like the style of binding, is governed largely by the kind of book and the use to which it will be put. In most cases it is desirable that the top should be cut smooth, as this helps to keep out dust; gilding the top gives it a more solid surface and therefore affords better protection. A fine binding will usually have all three edges cut and gilded or coloured, but in many cases it is preferred to leave the fore-edge and tail untrimmed. Books which command a fancy price, particularly first editions, often hold much of their value in the width of the margins, and should on that account be left entirely uncut. The same rule applies to early printed books. Books intended for reference should have all edges cut smooth to facilitate use; the edges may be sprinkled or coloured to prevent a soiled appearance, but the luxury of marbling may well be reserved for the adornment of ledgers.

The edges having been finished and the headbands set, the covering is next proceeded with. The principal materials used for the covering of books are leather, vellum, buckram, and cloth. Embroidery, silk, and other fabrics are also occasionally employed, but for fine bindings and for books that have to stand hard usage there is nothing to equal leather, provided, of course, that it is of good quality. Much of the leather used for binding during the last seventy or eighty years has failed to stand the test of time. The superiority of the older material is frequently seen in books that have been rebaked, where the new back has already perished leaving the original sides still in possession. This inferiority, due to faulty methods of preparation and the use of injurious chemicals, was the subject of investigation by a Committee of the Society of Arts a few years ago. Their report¹ has already borne good results, and most manufacturers of binders' leather now supply skins guaranteed free from acid. But the binder must shoulder his share of the blame for the unsatisfactory condition of leather bindings. Paring the leather facilitates neatness of finish, but it also greatly weakens the leather. Too often strength is sacrificed to the over-rated virtue of 'finish,' and the leather is so pared down as to leave no more than a

¹ Report of the Committee [of the Society of Arts] on Leather for Bookbinding, 1901.

thin layer of the outer skin, and this especially at the hinges where the strain is greatest and strength is most needed. To judge the quality of leather, especially after it is on a book, is a matter of special knowledge and much experience; some of the imitation leathers now in use may easily deceive the unwary. *Punch's* definition of the three grades: 'leather, something like leather, nothing like leather,' is particularly applicable to the bindings of to-day.

Morocco, which has no rival for fine bindings, originally came from southern Spain and Morocco and was made of goat skins tanned with sumach. Seal, a good leather possessing qualities somewhat similar to morocco, is not so well known as it deserves to be. The small goat skins, dyed in various shades of red, which have of late years been imported from the Niger country, are excellent material and the irregularity of colouring gives a pleasing effect, but the surface is not suitable for decorative tooling. Russia leather so much in fashion a century ago, probably owing to the attraction of its odour, is not durable; after a time it gets dry and friable and the backs and joints break away in a fine powder. Old calf is often very good material, but the modern product, though its smoothness and colourings are attractive, should be avoided, since the virtue has been taken out of the leather in the manufacture,

and it will not last. Pigskin is the strongest leather used in bookbinding and will stand much hard wear. It is therefore specially suitable for heavy volumes and books in everyday use; but as any attempt at dying involves loss of some of its qualities it should be used only in its natural colour. Even in the selection of pigskin, the familiar advertisement tag, 'beware of imitations,' is by no means to be disregarded. In the eighteenth century plain brown sheepskin was in general use for ordinary books, and is often found to be still in remarkably good condition. Roan, basil, and other modern forms of sheepskin are hardly likely to come out of the test so well, and should not be used for books of permanent value. Vellum, more in favour in the sixteenth century than in recent times, is not a kindly material for binding. Books, especially thin volumes, bound in vellum object to open freely and will not remain quiet when in use. Moreover it is much affected by atmospheric conditions, and generally requires ties or other inconvenient devices to keep the book properly closed and prevent it from warping on the shelf. Buckram, cloth, and what is called 'art canvas,' represent the cheaper class of coverings. They are the usual materials for publishers' bindings, but they are also invaluable to the bookman who desires to keep his shelves tidy. Provided the sewing and other structural work is sound, these materials are sufficiently

durable and comely to serve the purpose of the lover of books who cannot afford the luxury of leather. The lettering on these books should always be on the binding itself, and not take the form of pretentious-looking leather lettering-pieces stuck on the back. Opinion is much divided as to the relative qualities of buckram and cloth, but those who elect to bind in buckram would do well to remember that the red colours are usually very fleeting.

A book entirely covered in leather is called whole or full-bound. A half-bound book has leather back and corners, and the sides are covered with cloth or paper. When only the back is leather, the book is said to be quarter-bound. A particular form of this style in which the back is of brown leather and the sides covered with crimson paper is called Roxburghe binding from its being the pattern adopted by the Roxburghe Club for its publications. Quarter leather with cloth sides and vellum tips to protect the corners makes a specially neat and useful binding for octavo books.

With the covering of the book the forwarding process is complete, and the volume is passed on to the finisher for lettering and decoration. Leaving aside publishers' cloth bindings, on which coloured inks and pictorial designs often figure, lettering and external decoration is mostly worked in gold. For impressing the letters and ornaments on the leather

the finisher employs wooden-handled brass tools on the end of which the letter or ornament is cut in relief. These tools are used heated to a certain temperature, the exact degree of which is a matter of experience. Armorial stamps and large ornaments which require heavy pressure are applied by means of a press; but lettering and decorative designs built up of separate small ornaments are worked in by hand. For ornamental bands a roll which repeats the design as it revolves is sometimes used; and straight lines are put in with a similar tool called a fillet. In proceeding to work, the design is usually first schemed out with the tools in black on paper. This copy having been fixed in position on the book, the binder goes over it with the tools, stamping the design upon the leather through the paper. The impression thus left on the book is then painted in with glaire, after which gold leaf is laid on with a pad of cotton-wool, and the tools are again impressed exactly in the same positions to fix the gold. This being done, the superfluous gold is rubbed off and the book is polished and varnished as a finishing touch. Other and less used methods of decorating leather bindings are blind tooling in which the design is impressed into the leather without gilding, inlaying with leather of different colours, painting, and staining. Embossing, in which the design is raised on the surface, is also

occasionally used, but this style seems more suited to a blotter than to a printed book.

The bindings of printed books have little connexion with those sumptuous covers of precious metal, enriched with ivories, enamels, and gems, which, in olden days, were wrought by the goldsmith for the preservation of valuable manuscripts. Wooden boards and leather—either calf, deerskin, or pigskin—formed the humbler but serviceable binding in general use for early printed books. In large folios the leather usually covered the whole of the board, which was often further protected against wear and tear by brass bosses and corner-pieces. Smaller books were sometimes half-bound; in this case the leather covered only the back and about two inches of the sides, leaving the rest of the boards bare wood. Many of these early books were sewn on double bands of thick leather, the thread going round both in figure-of-eight fashion. The leather covering was decorated by stamping it with various devices and patterns. The tools for this work were usually cut in *intaglio*, so that the device shewed in low relief on the binding; but on some German books the design was impressed into the leather.

The decoration of Italian bindings consisted chiefly of interlaced patterns, while in France and

the Netherlands panel stamps were largely in use. English binders of the fifteenth century were in the habit of decorating their books with a number of small dies arranged in bands and circles. But the bindings that came from Caxton's workshop usually had a border of triangular stamps, and the centre was divided by diagonal lines into diamond-shaped compartments, with a flower, griffin, or other small ornament in the centre of each. Small dies were superseded by the panel stamp and by the roll, a wheel tool which produced a continuous pattern in the form of a ribbon. Panel stamps frequently formed the complete decoration of a small book, while the roll, sometimes in conjunction with a panel, served for larger volumes. A common English panel binding at the beginning of the sixteenth century contained on one side the royal arms, France and England quarterly, with dragon and greyhound as supporters, and on the other a Tudor rose supported by angels, with the arms of London and other accessory symbols. This pair of panel stamps, with certain variations, was used by several different binders, and frequently bore the initials and mark of the binder. A few pictorial panels also occur, but these were much less common here than in France. The roll, at first a broad finely-cut design, soon deteriorated into a narrow meaningless ribbon, and the extinction of stamped

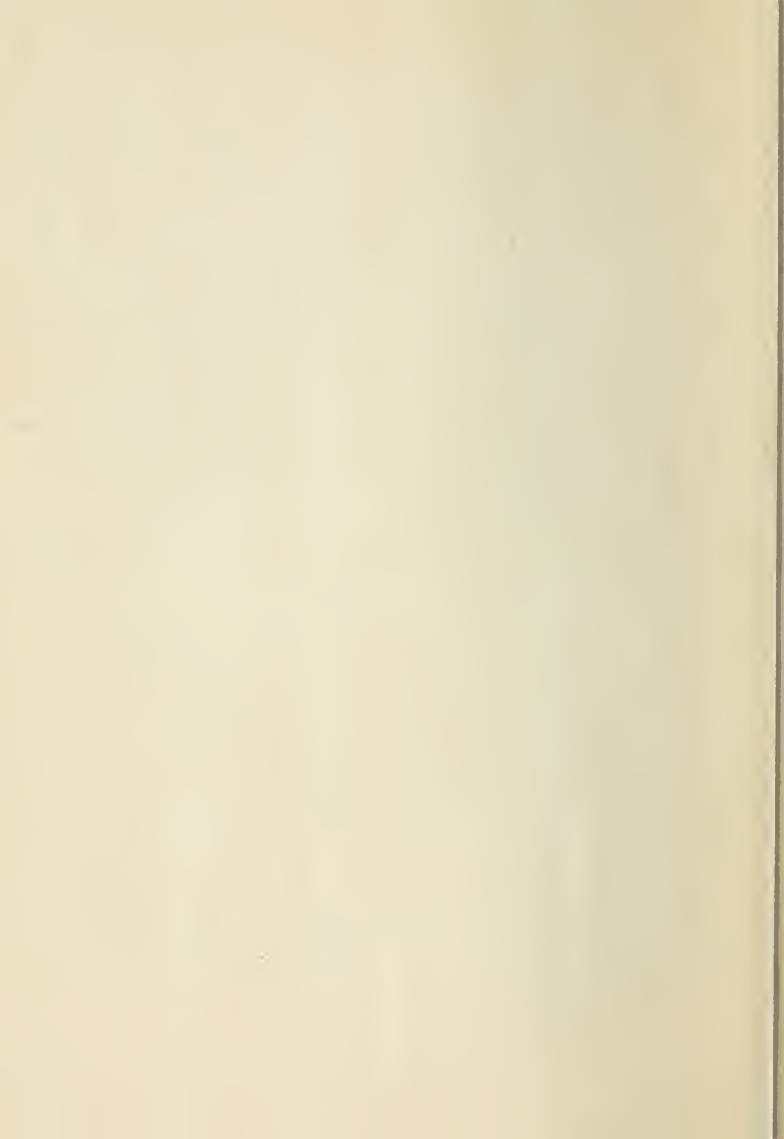
work followed closely upon this debasement. All these decorations were stamped blind.

The introduction of gold tooling on leather began a new era in the decoration of bookbindings. This art, brought from the East, was established in Italy towards the close of the fifteenth century, and soon spread into other countries. The patronage and taste of two celebrated collectors contributed largely to the fame of sixteenth-century Italian gilt bindings. These were Jean Grolier, a Frenchman resident in Italy, and Tommaso Maioli, an Italian, both of whom adopted a distinctive style. In Grolier bindings the chief feature is a framework of geometrical design formed of interlaced bands, frequently with arabesques as subsidiary ornament. Maioli bindings are somewhat similar in character, but the framework is less dominant, and they are inclined to have a more graceful and easy appearance. The return of Grolier to his native country in 1529 gave an impetus to the development of the art in France, and under encouragement from a long succession of royal and distinguished collectors the French binders attained a height of excellence in the design and execution of gold-tooled work not surpassed in any other country. For a time but little is known of the binders themselves, and the various styles are connected with the possessors of the books—Francis I, Henry II, Catharine de' Medici, Diane de Poitiers, and others—

rather than with those who designed and wrought them. But with Nicolas and Clovis Eve, who bound for Henry III (d. 1589) and his successors, there begins a line of distinguished craftsmen who impressed their personality upon successive styles. The name of Eve is associated with bindings covered with small compartments composed of palm leaves or laurel sprigs; and many books of this period, especially those bearing a coat of arms in the centre, are enriched with a *semis* of fleurs-de-lis or other small ornaments. The books of the great collector De Thou (d. 1617) are, however, for the most part in plain leather, with his arms, a chevron between three gad-flies, in the centre, either alone or accompanied by those of his wife. The characteristic of the work of Le Gascon, the seventeenth-century binder, is the use of *pointillé* tooling, in which the lines are broken up into dots, producing a particularly brilliant and delicate effect, especially on the red morocco which he mostly used. This style, which was very widely imitated, continued in fashion until about 1660. Padeloup le jeune (d. 1758), the most famous of a family of noted binders, was celebrated for his elegant *dentelle* or lace borders; one of his patrons was Madame de Pompadour. Derome le jeune (d. ab. 1788) followed in the footsteps of Padeloup and likewise gained fame by the beauty of his *dentelle* borders, but the crime of sawn backs



An English gold-tooled Binding
Horatius. Cambridge, 1711



and cropped margins has sullied his reputation as a true craftsman. Bookbinding, in common with other arts, suffered eclipse in the upheaval of the Revolution; but in the nineteenth century the work of Thouvenin, Trautz, Duru, and others restored the tradition of finished workmanship, though not always accompanied by the inspiration of originality.

The first binder in England to practise gold tooling appears to have been Thomas Berthelet, printer and stationer to Henry VIII. In an extant bill for books bound for the King by Berthelet in the years 1541-3 are instances of this new style: 'a New Testament in latyne and a psalter englishe & latyne bounde backe to backe in white leather gorgeously gilded on the leather,' others were 'bounde after the Venecian fascion,' or 'covered with purple velvit and written abowte with golde.' English binders derived from the continent not only the art of gold tooling, but took also their inspiration from the same source, and most English gilt bindings of the sixteenth century were either executed by foreign workmen or copied from foreign models. The leather used in England was nearly always brown calf or sheep; morocco, though known in France, was rarely employed in this country before the seventeenth century. A favourite style of ornamentation consisted of heavily gilt centre and corner pieces, with the rest of the side either left

plain or powdered with a small ornament. Many of the books bound for Archbishop Parker, who established a binder in his own house, were gilt in this fashion. Queen Elizabeth, a great lover of fine books, had a special liking for embroidered bindings and for books bound in velvet with gold or silver mountings; some of the former are said to have been worked by the Queen herself. These embroidered bindings, worked in coloured silks and enriched with gold and silver thread, were a specially English production. James I also had a taste for velvet bindings, but his more characteristic style is leather with the royal arms in the centre of a diaper of fleurs-de-lis or other small ornaments. At this time good work was being done both at Oxford and at Cambridge; and in his singular community at Little Gidding Nicholas Ferrar 'entertained a Cambridge bookbinder's daughter that bound rarely to show them that piece of skill.'

Other fashions included the fan style, consisting of a circular fan-like ornament in the centre with similar sections in the corners; imitations of Le Gascon; and mosaic bindings of inlaid leather. The second half of the seventeenth century produced the distinctively English style known as cottage binding, in which the frame-work at top and bottom of the design bears some resemblance to a low gable. This style is usually associated with the name of Samuel

Mearne, who, though appointed binder to Charles II, was not himself a binder. The Harleian style, so called because it was used for the great collection of Robert Harley, first Earl of Oxford (d. 1724), consists of an ornate centre piece, generally diamond shaped, with a broad tooled border. Roger Payne, one of the best and most conscientious workmen of the second half of the eighteenth century, has acquired a wider fame than any other English binder, partly owing to the curiously detailed form in which he presented his bills. He worked chiefly in Russia leather and straight-grained morocco, and bestowed his most elaborate decoration upon the backs of the books, leaving the sides comparatively plain. His traditions were carried on by Charles Hering and others, including Charles Lewis who bound many of the Althorp books, and Kalthoeber who revived the art of painting pictures on the edges of books under the gold. In this method of decoration, of which Edwards, a Halifax binder, is the best-known exponent, the painting on the edges of the book shews only when the leaves are fanned out, and is completely hidden under the gold when the book is shut. Francis Bedford, at one time a partner of Lewis, was one of the most noted binders of the nineteenth century and bears a reputation for sound workmanship. In recent times conspicuously good work has been done in the designing and execution

of gold-tooled bindings by both amateur and professional binders. In this movement a leading part has been taken by Mr Cobden-Sanderson, Mr Douglas Cockerell, and Miss S. T. Prideaux; and, largely due to their teaching and practice, it is now well recognized that no exterior decoration of a book, however artistically designed and skilfully executed, can make a satisfactory binding unless it is combined with equal attention to the principles of sound forwarding.

It is the custom in this country and in America to issue new books in cloth binding, but on the continent the practice of publishing new books in paper covers still obtains. On the assumption that a book will either be read and thrown away, or bound and put on the shelf, the paper cover might be considered adequate to its purpose; but, since the cloth cover is fairly serviceable and presents a decent appearance on the shelf, besides being more comfortable to hold, it seems to be well worth the small initial extra cost.

Down to the early part of the nineteenth century trade bindings generally consisted of plain calf or sheep, or of boards covered in grey paper with a white label on the back. About 1820 the use of glazed calico was introduced, and some ten years later the fabric which goes under the name of cloth

began to be specially manufactured for the covering of books. At first these covers were quite plain with paper labels on the back; but soon the sides were embossed by way of ornamentation, and gold lettering took the place of the paper label. Then, gold was employed for decoration as well as for lettering, and elaborate designs were devised, frequently covering the whole of the boards, especially in the pretentious volumes known as table books. More recently colour printing has been much resorted to for additional effect. At the present time much ingenuity and some taste are devoted to the production of attractive book covers, and extraordinary variety prevails, ranging from the plainest cloth to pictorial decoration in colours re-enforced with gilding. The possibility of end papers as a field for subsidiary decoration has also been exploited, and some of the papers specially designed for particular books undoubtedly harmonize and lend additional charm to the volume.

The binding of books in publisher's cloth, or edition binding as it is sometimes called, is a distinct branch of the trade. Instead of dealing with single volumes, hundreds or even thousands of copies are turned out at a time. Special machinery has been devised for dealing with every stage of the work, and to such a point has the process been perfected that in at least one large establishment the output is

2000 volumes an hour, with a possible total of nearly 200,000 a week. A book in publisher's cloth differs from a properly bound book chiefly in the method of connecting the book with the binding. In the bound book the ends of the cords on which the sheets are sewn are laced into the boards, which are thus fastened directly and strongly to the book before the covering material is put on. But with books in publisher's cloth the case is first made separately, and the book is then fastened into it, the two being connected only by a strip of thin muslin glued on to the back of the book and the inner edge of the boards. In better-class work the book is sewn on tapes, and the ends of these, as well as the muslin, are glued down on the inside of the boards. It is evident that a book bound in this manner—'cased' is the trade term—cannot be so strong as a properly bound volume; but the method has the great advantage of cheapness, and if the work is well done the book will stand a considerable amount of use. But, unfortunately, this is not always the case. Publishers take great pains over the component parts of a book, such as paper, type, illustrations, and the design of the cover, but they frequently fail to exercise the least care as to how it is put together: so long as the book looks attractive and does not go to pieces before it reaches the reader's hand, they seem to be satisfied.

This may suffice well enough for the many books which are of only temporary interest; but in the case of important works of more permanent value it is surprising that publishers do not, at the expenditure of a little trouble and an extra sixpence, see that the book is put together in a more satisfactory manner. In the first place the paper is mostly very poor stuff, without any fibrous quality; but, perhaps, under the present conditions of manufacture and the pursuit of low prices, this defect is not easily amended. In addition to this, the thread used for sewing is so thin that it readily cuts through the spongy or brittle substance which passes for paper. This is often aggravated by the use of a barbarous machine for sewing, which slits every section right through at top and bottom of the back in order to pass the thread into the slot so formed, and the destruction of the book is already begun at the weakest spot: everyone knows how a much-used book goes at the bottom of the back, just where it is (but ought not to be) held by the reader's thumb. The illustrations, generally printed on shiny 'art' paper, are nearly always inserted as separate plates by being pasted on to an adjoining leaf. The consequence is that the book will not open properly between the plate and the leaf to which it is attached, and the plate soon comes away, dragging the leaf with it; the other leaf of the pair having nothing to hold it, soon

detaches itself also, and so the disintegrating process goes on. Instances of this may easily be found among important and expensive books of travel containing numerous plates and published within the last few years. Colour-books have notoriously weak constitutions. Such books cannot be rebound satisfactorily. It is impossible to separate the plates from the leaves without damaging the latter, and this necessitates the guarding of both leaves and plates, as well as the mending of the back of the sections; the guards cause an awkward thickness in the back and make a most uncomfortable volume, while the binder's bill may well raise a question as to whether the book is worth the cost. A simple method, too seldom followed, of avoiding this defect, is to print the illustrations in pairs so that they may be sewn in with the sheets.

With the advent of the three-colour process it has become common to print the title of a plate on a leaf of flimsy paper facing it, instead of printing it on the plate itself. It is not easy to see a reason for this pretentious and inconvenient custom: the flimsies easily get torn and lost, and the illustration becomes nameless. Another vicious practice is the use of wire staples in place of sewing thread. In this method the sheets are fastened to the muslin by wire staples driven through them and clinched at the back. The wire soon rusts and eats through

the paper, allowing the leaves to fall out of the book. Books are still occasionally 'bound' by the caoutchouc process: that is, the back of the volume is cut smooth, coated with a solution of rubber, and stuck into the case. If those who adopt this process would examine books treated in this way twenty or thirty years ago, they would find that the rubber has entirely perished, leaving the book a bundle of detached leaves—but, apparently, some publishers never see books after they have left the warehouse.

CHAPTER X

THE HANDLING AND MISHANDLING OF BOOKS

Of the risks of destruction to which books are exposed, that of fire is the most formidable, whether it be by violence, as in the case of the Strassburg library in 1870, and the deliberate burning, by the same brutish hands, of the University Library of Louvain so recently as 1914, or by the more civilized though not less destructive agency of accidental conflagration. Of the latter there are many instances, from the wholesale destruction of books in the Great Fire of London in 1666, and the irreparable damage to the Cottonian manuscripts in 1731, down to the partial destruction of the Turin library in 1904 and the burning of the New York State Library at Albany in 1911. But books are difficult material to make a thorough end of by fire. Church and state authorities discovered this when they endeavoured to destroy heretical books by means of public bonfires, and, says John Hill Burton, 'in the end it was found easier and cheaper to burn the heretics themselves than their books¹.' However, the destruction which fire fails to accomplish may readily be com-

¹ *The Book-Hunter* (1885), p. 210

pleted by its twin enemy water, for it is by no means an unknown experience that greater damage has been done to books by the water with which the flames have been attacked than by the fire itself.

Water, in the more rarefied and insidious form of damp, has been, probably, an even greater agency in the ruin of books. In an acute form damp will in time bring a volume to such a point of decay that it crumbles away in powder; in a lesser degree mildew may ruin the binding and irremediably stain the leaves; while even a slight amount of dampness will favour the ravages of bookworms. These pests, more evident in their tracks than in their persons, are not often found except among books which are subjected to a somewhat humid atmosphere and are seldom disturbed. They are the larvae of a small beetle belonging to the genus *Anobium*, and have the appearance of a whitish maggot about five-sixteenths of an inch in length, with a dark brown head. In their silent progress some bore holes in all directions through the volume, while others confine their industry to the wooden boards of the covers which they gnaw to powder. They shew a discriminating taste in paper, for their attentions are conferred mainly upon books of the fifteenth and sixteenth centuries; they seldom risk their digestions by attacks on the modern stuff which does duty for paper. When they are discovered to be in possession

their activity may be discouraged by opening the book freely so as to disturb them in their tunnels. The book should then be treated with benzine or formalin, and shut up in a box for a few days before being aired off and returned to the shelf.

When the bindings of books are affected by damp in the form of mould spots, they should be well rubbed with a soft duster—not forgetting to open the book and rub the insides and edges of the boards, as well as the outside—and thoroughly aired before they are put back. The shelves may also receive attention by the application of carbolic acid or some other germicide. Good ventilation is one of the best preventives of damp, and in order to allow free circulation of air it is advisable that an interval of about half-an-inch should be left between the inner edge of the shelf and the back of the bookcase. While the bookcase is in question it may be noted that, since contact with a sharp angle is liable to be destructive to books, the arris—that sharp and true edge which is the pride of the joiner's craft—should be ruthlessly rounded off the front of the shelves. Books should not be packed so tightly on the shelves that they cannot be taken from their place without risk of damage to the binding; nor should they be allowed to stand so loosely that they gape open and let dust fall between the leaves.

Other enemies to the well-being of books are the

fumes of gas, most noticeable on the shelves near the top of the room, which, in time, will reduce leather bindings to dust; strong sunlight, which also dries up bindings and plays havoc with their colour. Last, though not least, spring cleaning, when books are banged together with a will, making joints to crack and boards to part company, while the intelligent dust heads straight for the open window (so it is firmly believed); afterwards, the book-lover has the consolation of being assured that the books have been put back on the shelves 'exactly as they were.'

The leather binding of a book that is in frequent use retains its suppleness longer than one which stands idle on the shelf. This is probably due to the slight dressing of grease which it receives in being handled. If the leather is allowed to get very dry it loses much of its strength, becomes brittle, is liable to crack, especially at the joints, and the surface crumbles away. To keep leather bindings in good condition they should be treated occasionally with some lubricant. A good preparation for this purpose is a mixture of castor oil and paraffin wax. 'To prepare it, some castor oil is put into an earthenware jar, and about half its weight of paraffin wax shredded into it. On warming, the wax will melt, and the preparation is ready for use¹.' If paraffin

¹ Douglas Cockerell: *Bookbinding, and the Care of Books* (1901), p. 303.

ointment be used instead of paraffin wax, the ingredients mix more readily and it will not be necessary to warm the preparation before use. Both vaseline and furniture polish have also been used for this purpose. The former is fairly satisfactory, but as the acrid odour of the latter suggests the presence of an undesirable element it had better be avoided.

In taking a book from the shelf it should not be plucked forth by hooking the forefinger into the headband, for it is by the repetition of this action that the headband gets broken and the upper part of the back is torn so that it hangs loose and, presently falling off, is lost. In earlier days when books stood with the fore-edge outwards they fared no better; clasps and silk ties offered tempting tags wherewith to draw the volumes from their places, and it thus came about that many books were bereft of these really rather tiresome appendages. A better way is to place the forefinger firmly on the top edges of the book about an inch from the back and tilt the volume forward so that it can be grasped between the thumb and fingers. Or, the volumes standing on each side of the book may be tilted in with the thumb and finger just sufficiently to allow the book to be seized and drawn out without touching the top.

Though the extended use of machinery has

introduced a kind of ruthless element into modern book-construction, yet a considerable number of books are, happily, still issued uncut; and, surely, there are few more pleasurable times for the reading book-lover than the half-hour spent with the paper-knife in cutting up and honey-sipping a new book. Sometimes, however, that half-hour may prove a little trying to anyone who likes to see neatly cut edges, for it is nearly impossible to cut some of the modern spongy paper without leaving the edges in rags and jags. For cutting a book an ivory knife with a smooth edge is the right thing to use, and, it seems necessary to state, neither a finger nor a hairpin is a suitable substitute. In the act of cutting, the knife should be drawn down rather than pushed forward or the edges may cut up roughly; and if the edge of the knife is drawn across the hair two or three times the slight lubrication thus applied will cause it to do its work more smoothly. In cutting the top edges special care should be taken to cut quite up to the back; a quarter or half inch left uncut and then torn when the book is opened is but too commonly seen. Some American books of recent date are a snare to the unwary, for, though cut smooth on the top, some of the bottom edges are left to be cut by the reader, and unless the volume be opened cautiously a leaf may be torn in half.

Another point which deserves more attention than it usually receives is the method of opening a new book. If a book is to open comfortably and the leaves turn over freely, the back, which is rounded while the book is closed, must assume a concave shape when the book is in use. But the back of a new book is stiffened with glue, and if it be opened violently in any one place, with the leaves gripped fast between finger and thumb, the back will probably crack at that point, making an awkward angle; and, since the back cannot afterwards take the supple curve which is its natural form, the book will always evince a desire to open at that particular place. To prevent this, a new book should be carefully opened throughout. It may be done in the following manner: 'Hold the book with its back on a smooth or covered table; let the front board down, then the other, holding the leaves in one hand while you open a few leaves at the back, then a few at the front, and so go on, alternately opening back and front, gently pressing open the sections till you reach the centre of the volume. Do this two or three times, and you will obtain the best results¹.'

A book having been carefully cut and properly

¹ These directions are from a slip which a few years ago a thoughtful publisher inserted as a book-marker in some of his new publications.

opened is entitled to yet further consideration. In reading, it should not be held near the fire or the boards will warp; nor should it be left lying in the sun, for the same reason. There are various ways of keeping the place when reading a book. It can be laid face downwards; or it can be dog's-eared, by turning down the corner of the leaf; or, following the habit of a certain school-boy when absorbed in Henty, the corner of the leaf may be pinched off as it is turned over. A slip of paper is a simple and inexpensive alternative to any of these barbarous practices. In closing a large book the end leaves are liable to crumple up if the book should happen to be open near either end; to avoid this, take the advice of an eminent librarian and open the book about the middle of the volume before shutting it up.

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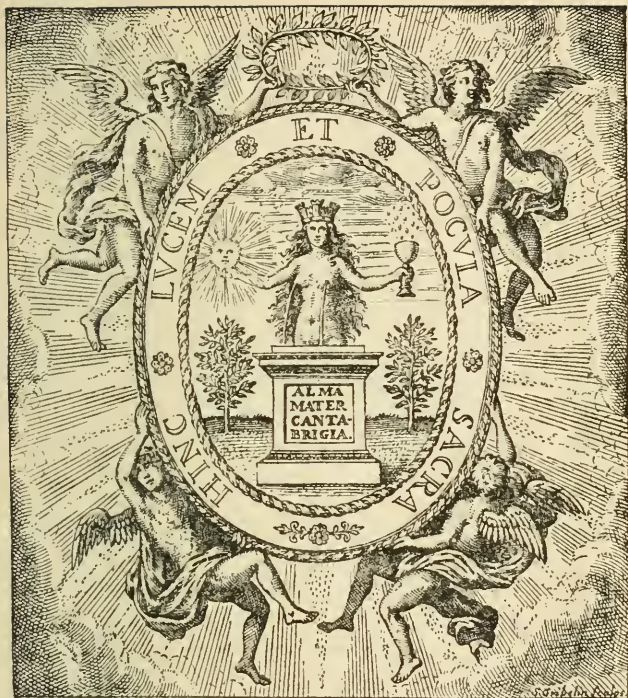
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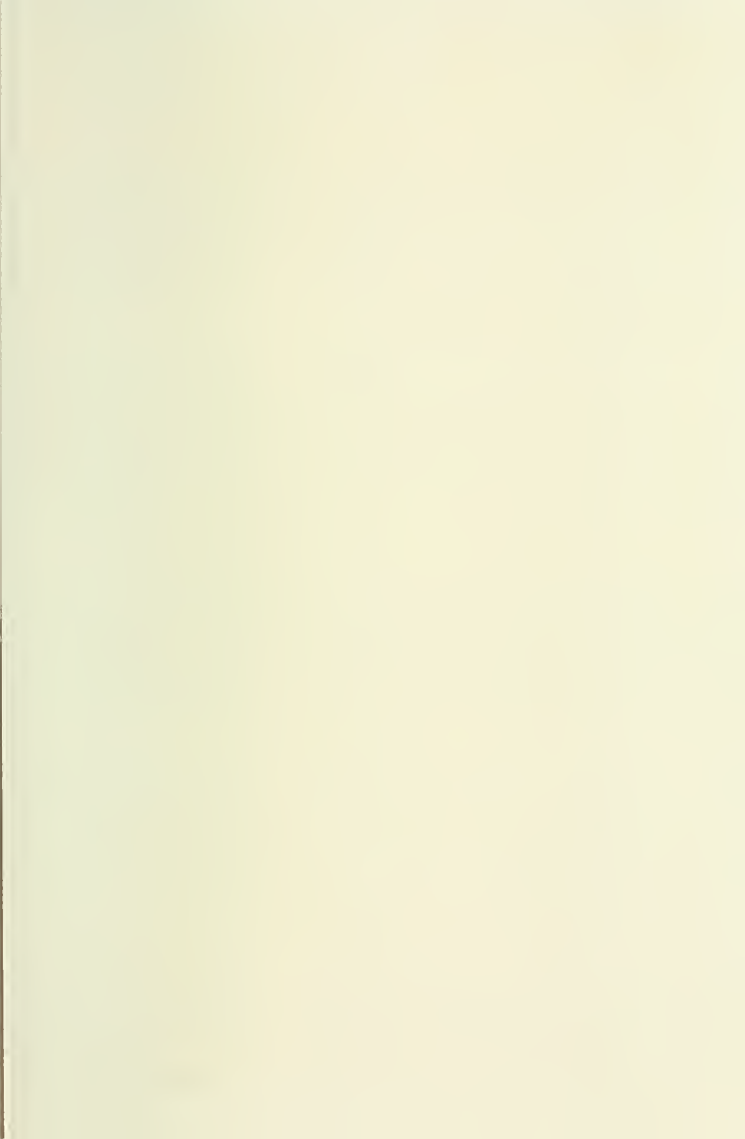
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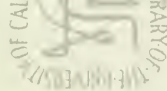
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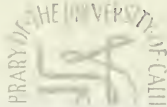




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